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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THE THEORY AND PRACTICE OF MEDICAL ETHICS.*

By F. B. TIBBALS, M. D., Detroit, Michigan.

[Published in The Physician and Surgeon exclusively]

There is no subject akin to medicine, concerning which both the laity and the profession are so lamentably at sea—the laity as regards the theory, the profession as regards the practice, as that of medical ethics.

I trust it may not seem presumptuous for one whose beard is not yet gray, and whose alopecia is still rudimentary, to introduce so mooted a topic for your discussion. My apology for this presumption lies purely in the aforesaid physical condition. The young medical man of to-day will be the professional patriarch of the future.

Every man in the early years of his professional life has, I believe, right ideas of medical ethics, both theoretically and practically. But as year after year goes by how often it is that, in the struggle for professional success, his ethical conscience becomes warped, and he stoops to practices, affecting his patients and his professional brothers, which were considered beneath him in his earlier years. It behooves the younger practitioner, I think, to set up for himself an ideal of honorable dealing toward which he may strive coincident with his struggle for professional success, and this ideal I present to you to-night. The nearer he reaches his ideal of honor, the better will be the profession of the future. This ends my apology.

At the beginning of the existing hostilities between the Detroit Board of Health, now so well known as the "Dorcas Club", and the small-pox bacteria, the free newspaper discussion could not but draw my attention to the various views of medical ethics held by both the non-professional and professional public. So absurd a proposition even was formulated and defended, by certain physicians, as that medical ethics prevented the prompt action of the medical health officer, to suppress the contagion, and condoned the negligence which has cost the city thousands of dollars and too many human lives. No wonder that the non-medical public were incensed, and the press teemed with condemnation of such a paltry subterfuge, and words were hardly strong enough to censure such constructions of the grand code of honor which our medical ethics is, when rightly interpreted. We cannot blame the laity for a faulty interpretation of medical ethics when we see how little knowledge of its true theory they gain by observation of its action, and less still of its true exemplification in practice. In reality the laity have come to look upon medical ethics merely as the mystic standard about which physicians rally in times of danger, and leave undisturbed in the musty, dust-laden archives in times of peace, and my personal observation inclines me to the opinion that there is at least a germ of truth in this view.

---

* Read before the Detroit Medical and Library Association.

Our theory of ethics is based upon the so-called code, adopted some fifty years ago and as applicable to-day as ever. In this code there are three fundamental rules governing—(1) The obligations of the public to the physician; (2) The relations of the physician to the public; (3) The relations of the physician to his colleagues.

As regards the obligations of the public to physicians we all agree that there are many of them still outstanding, and further discussion is unnecessary.

Regarding the relation of the physician to the public we are in the main ethical. Our charity is unstinted, our actions humane, and as the custodians of family skeletons, and the guardians of the public health, we alike do our part.

It is in our relations to one another that our practice of medical ethics so rarely conforms to the theory. Theoretically we should follow that precept instilled into the minds of us all during the golden Sunday school age of youth, namely, the golden rule, "Do unto others as you would that they do unto you:" practically we seem to have adopted the modification, "Do others before others do you."

That my criticism is not too severe I call you all to witness. There is not one but has at some time seen mean underhanded treatment accorded the individual by his professional brothers and professional acts of which he cannot approve.

The consultant, who improves the opportunity to impress his knowledge and his confrère's lack of it, and then calls again to-morrow, to develop the impression of the previous day.

The neighbor or social friend, who in his gentle insinuating way undermines your patient's confidence in you by disclosing how differently he would treat the case.

The specialist, who calls you incompetent to treat surgical or gynecological cases, while he conducts a more or less general practice ranging all the way from venereal or obstetrical cases to sweating feet and sore eyes.

The cheap jack, always ready to underbid your modest fee and disparage you besides.

The semi-quack, whose cantharides plaster cures your case of chronic pleurisy by drawing off the water around the heart.

The optimistic liar, who never signs death certificates, never has puerperal fever or complications in other diseases, and whose vividly-described successes, in grave cases, realistically related to your patient by the well-meaning neighbor, secure your discharge while the cheerful liar reluctantly takes your place.

The so-called irregular, whose nominal adherence to some popular but fallacious dogma deludes his patients, defrauds his professional associates, and lures the nimble dollar to his capacious, rapacious pockets.

The dispensary doctor, Professor So-and-so, who fills his office thereby with paying patients, incidentally treating free, of course, many who were paying patients of other physicians.

The modest, retiring fellow, who is so abashed to see in *The Evening Advertiser* a reprint of his lecture on "Mushrooms," or a description of his removal of seven fish-hooks and a meat-saw from the vermiform appendix, a recent photograph of the famous Doctor Ethicus usually preceding the article.

The man who writes glowing laudations of "Moses' Bullrush Soap," or "David's Gonorrheal Panacea," for the pure love of science, or occasionally, I am told, for so much a line.

Our popular contributors, who rush into print on every available topic, whether it be a new method of cultivating the acquaintance of the captivating microbe, or the discovery of a cross-eyed scholar in the public schools.

I might multiply indefinitely these types of professional misconduct. It is not so much the letter but the spirit of the code that is violated. The theory of medical ethics calls only for the practice of fair play. Our noble profession should be the embodiment of kindness, charity, and self-sacrifice. We are kind and charitable to the public, but not to ourselves. Our disagreements and professional jealousies have become proverbial, and all result from violations of true medical ethics.

There is no method of enforcing the code except by a higher standard of professional honor. Every unprofessional act hurts not only the individual concerned in it, but the entire profession. Because of these bickerings and jealousies, our influence in measures concerning the public health, and in legislation for the suppression of quackery and the advancement of medical science, counts but little, where a united profession could accomplish much. There was never more need of a united profession than now. Our own state is a hotbed of quackery where proprietary cure-alls, cancer doctors, abortionists and advertising specialists of every kind thrive and prosper, taking the hard earned dollars of the gullible public, granting them no return and no redress.

The public submits to be thus gulled and defrauded because through our lack of unanimity and our unprofessional conduct the idea has become widely prevalent that all medicine is more or less a humbug, and that our desire for rigid practice laws is not an unselfish one, but rather an attempt to legislate for our own benefit, to enact a prohibitory tariff whereby our own mills may turn out the doctors and, competition being thus limited, to raise the cost, to the consumer, of their quinine pills and liver pads.

If we want medicine to occupy the position in public esteem which it merits we must first adopt and practice a higher ethical standard ourselves. We must pull together, and educate the laity to see that quackery exists at their expense rather than ours, and that there is something in rational and preventive medicine besides big words and bitter draughts.

Medicine can never be an exact science. The obscurity of symptoms, the uncertainty of drugs and the empiricism of treatment will always, in a measure, exist. But under the brilliant leaders constantly arising we can advance to a much higher standard of knowledge, skill, and professional attainments, if the rank and file will only do their duty.

Who is ethical? He who treats his professional brothers as he would himself be treated, who meets them "on the level and parts on the square." "To thine own self be true, and it must follow, as the night the day, thou cans't not then be false to any man."

And now, gentlemen, I am credibly informed that none of these types of ethical misconduct above mentioned exist at the present time in our city, although I am firmly convinced that there are sinners in high places in the towns immediately adjacent. Therefore, there is absolutely nothing personal in these remarks; they are general for the good of the profession at large; but I hope to imbue you with such a regard for a high ethical standard that should any of these sinners from neighboring cities move here they may be received in a way befitting such dishonorable men.

DIPHTHERIA.*

By COLLINS H. JOHNSTON, B. A., M. D., GRAND RAPIDS, MICHIGAN.
GYNECOLOGIST TO BUTTERWORTH HOSPITAL, AND TO THE UNION BENEVOLENT ASSOCIATION HOSPITAL.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

MEMBERS OF THE ACADEMY: The paper and discussions which we have just heard have been very interesting and must prove of considerable benefit to us all. It has been said that there are two kinds of diphtheria, one due to the LOEFFLER bacillus, the other to streptococci. A few days ago a physician said to me, "Why do you not use nuclein in diphtheria? It is recommended in that disease by Parke, Davis & Company." On looking over their literature I found the local use of nuclein solution suggested in this so-called *streptococcus* diphtheria. This term is, I think, both misleading and unscientific, and should be abandoned. We might with equal propriety speak of diphtheria of the uterus and vagina with reference to the pseudo-membranous patches so often found in the birth canal in puerperal fever, for they, too, are caused by streptococci. So might all other inflammations of mucous membranes attended with the formation of a pseudo-membrane, whether due to pyogenic bacteria other then streptococci, or chemical agents, as corrosive sublimate, et cetera, be called diphtheria. But a pseudo-membrane is not necessarily present in *true* diphtheria. This is a specific, infectious disease, due to the ptomaines of the LOEFFLER bacillus, which in some cases produce only a simple angina, in others a fibrinous exudate, in others necrosis of the mucous membrane. The pseudo-membrane, when present, varies much in extent and thickness, and a diagnosis from the anatomical changes alone is frequently impossible. Diseases attended with the formation of a pseudo-membrane in the throat due to other causes than the LOEFFLER bacillus are not followed by the well-known sequelæ of diphtheria, and the term diphtheria should not be applied to them. It should be used in an *etiological* sense, and not in an *anatomical* one. If a pseudo-membranous tonsillitis or pharyngitis is caused by streptococci, call it streptococcus tonsillitis or pharyngitis if you wish, but not *diphtheria.*

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*Remarks on DOCTOR J. B. WHINNERY's paper before the GRAND RAPIDS ACADEMY OF MEDICINE. (See page 18.)

Mention has been made of a pseudo-diphtheritic bacillus, which cannot be distinguished morphologically from the LOEFFLER bacillus, and which resembles it very much in cultures. The principle reason for considering it to be a pseudo-bacillus is that it lacks virility, and has frequently been found in simple anginæ, and in the throats of healthy children. But not only have non-virulent bacilli been found in healthy throats, but LOEFFLER has found *virulent* bacilli in the mouth of a healthy child, and FRÄNKEL has found them in healthy conjunctivæ. In addition to the germ a certain predisposition or a lesion of the mucous membrane is necessary for the development of disease. The virulence of all pathogenic bacteria varies under different circumstances, and that of the LOEFFLER bacillus can be much reduced or entirely destroyed by subjecting the germs to the influence of heat, trichloride of iodine, et cetera, and again renewed by inoculating them into animals along with virulent streptococci. Bacilli bred from diphtheritic membrane show different grades of virulency, and FRÄNKEL has proven that in severe cases of diphtheria non-virulent bacilli exist side by side with the most virulent, and no one would question the identity of the former under these circumstances. It is said that the pseudo-bacillus will not turn bouillon acid; the same is true of the weakened or less virulent variety of the true bacillus. Hence I can see no good reason for considering these so-called pseudo-bacilli as other than true diphtheritic germs, which, if planted upon suitable soil may give rise to the most severe forms of diphtheria. In this respect the LOEFFLER bacillus is similar to the pneumococcus, which is an almost constant inhabitant of the oral cavity of man. Therefore all cases in which bacilli resembling those of LOEFFLER are found should be promptly isolated, and not allowed to mingle with healthy persons until the germs have disappeared.

This leads me to speak of the great importance of microscopical and bacteriological examinations in cases of diphtheria. It is frequently impossible to make a diagnosis from the general symptoms and ocular inspection of the throat until several days have elapsed. Meanwhile other members of a family may be unwittingly exposed. Occasionally the diagnosis is not made until a second or a third case develops. There is no doubt but that many mild cases are not reported to the health authorities at all on account of the dislike of many thoughtless persons of having their houses placarded, or because the attendant fears that the case in question may prove in time not to be diphtheria. Differences of opinion often exist among physicians as to the same case. One of the most intelligent physicians in this city was recently called to a sick child and diagnosed diphtheria. He reported the case to the health department and the house was placarded. The family was very much displeased with the diagnosis; telephoned the physician that same evening that he need not call again; called another doctor who promptly said the disease was not diphtheria, and the obnoxious sign was removed the next day. No adequate steps were taken by the health department to determine which of the doctors was right. Again, there is no certain means of telling when a convalescent is free from bacilli and can safely begin to associate with healthy persons, except by a bacteriological examination. I have found virulent bacilli present in the throat five weeks after complete disappearance of the membrane, and I believe the premature freedom given these convalescents is the cause of many of the cases of this disease. Our health department should secure the services of a competent bacteriologist (and there are now several such in this city) whose duty it should be to examine microscopically the throat of every case of suspected diphtheria, and also to reëxamine the case before the placard is removed from the house to make sure that no bacilli are still present. It is not wise to count the cost of this work at the expense of the many lives which are yearly destroyed by the disease. Moreover, the disinfection of a house after this and many other contagious diseases should be done personally by an intelligent agent of the department, and not left to people who are either too ignorant or too careless to do it thoroughly.

It has been said that diphtheria can be communicated through the air. It is not probable that the germs can be carried far in this manner. Direct contact with a diphtheria patient is no doubt necessary for the reception of the bacilli, which can be carried into the mouth with food and drink as well as with inspired air. I believe the germs have never been found in the free air of a city or house, in dust, et cetera. When kept dry in a thin layer, they soon perish. In a thick dry layer they may live four months, and in a moist state, seven months. The handkerchiefs, playthings, eating and drinking utensils of convalescents from the disease are probably responsible for the origin of many cases. In some instances children are probably infected by being kissed by adults who have what appears to be a simple non-diphtheritic sore throat.

One of the gentlemen has expressed the opinion that diphtheria may originate in decaying vegetable matter in cellars, and may be carried by sewer gas, et cetera. No authority with whom I am acquainted now believes that the disease or its parasite can originate *de novo.* Moisture is well known to prolong the vitality of the microörganism, but it is not saprophytic, it does not grow and multiply outside of the body. There is no doubt in my mind, however, but that the irritating gases of decomposing animal and vegetable matter give rise to catarrhal conditions of the throat which distinctly favor the development of the LOEFFLER bacillus.

It has been asked why the mortality is still so great in cases of diphtheria treated with antitoxine in the German and French hospitals. Most of the cases are sent to the hospitals from the dispensaries, and as the large majority of the children are of poor and ignorant parentage the disease is often of several days duration when treatment is begun. By this time the cells of the body have been so injured by the long continued action of the ptomaines of the disease that the degenerative processes in them continue after the ptomaines are destroyed by antitoxine, and death results. Moreover, cases coming under treatment late in the disease are frequently complicated by streptococcus or other bacterial infection, pneumonia, nephritis, et cetera, and in these cases death may follow from the complication. Antitoxine does not antidote the ptomaines of streptococci, else it would be useful in puerperal fever and other septicemias due to streptococci.

It is a specific for the toxine of the LOEFFLER bacillus, and BEHRING believes it will cure every case in which it is used early enough. It should be employed immediately in every suspected case, for the serum is absolutely harmless, and the use of a suitable dose in the beginning will not only save life but remove the necessity of using a much larger amount later, which, considering its cost and scarcity, is a matter for consideration. Antitoxine does not destroy the germs themselves, however, and the same examination of the secretions of the throat is necessary before discharging a case as after the old methods of treatment. BEHRING believes that his specific destroys the toxines of LOEFFLER's bacillus in the blood the same as in a test-tube, and that its beneficial effect is not a result of its action upon the cells of the body. Hence, when used for immunizing purposes it is excreted from the body in from two to three weeks, and re-inoculation is necessary to preserve immunity.

Several articles which I have read in the public press ascribes the discovery of antitoxine to ROUX, of Paris. This is a mistake. BEHRING unquestionably originated and developed the antitoxine treatment of diphtheria. The credit for this is freely accorded to BEHRING by ROUX himself. ROUX is a very excellent and accomplished bacteriologist who presented such striking results and in such a clear and convincing manner at the International Congress of Hygienists at Budapest last September that universal attention was attracted to this subject.

It is fortunate, however, that the newspaper notoriety did not come sooner, as the subject is not yet entirely out of the experimental stage, and such notoriety is very disturbing to the quiet laboratory work which is needed to place the matter upon an absolutely sound basis. There is great danger that exaggerated expectations may be aroused only to be disappointed.

The effects of antitoxine when administered early in a case are most marked. The best description which I have seen is that of KOSSEL, an assistant in KOCH's Infectious Institute in Berlin. Soon after an injection a slight redness of the skin near the point of puncture may be observed. There may also be a slight degree of pain. These conditions disappear the next day if the part is not massaged. If any infiltration follows an injection it is to be attributed to a mistake in technique. Occasionally eruptions resembling urticaria, measles, or scarlet fever occur which are supposed to be due to the presence in the serum of animal products other than the antitoxine. The membrane in the throat as a rule ceases to spread within twenty-four hours after the first injection. The development which sometimes continues for a few hours after treatment is begun is limited to parts which were already infected. By the end of the third day, the membrane is usually completely detached. If the case is uncomplicated the swelling of the submaxillary glands rapidly disappears. If streptococci are already present in the glands suppuration is likely to follow.

KOSSEL calls attention to a very interesting point in laryngeal cases, many of which have been treated by antitoxine with success. In some of these the dyspnea caused by the loosening up of the membrane at the end of twenty-four or forty-eight hours' treatment has necessitated the performance of tracheotomy. I recently saw such a case referred to in a Chicago newspaper as an example of the uselessness of antitoxine. It is evident that the membrane must be loosened up before it can be thrown off and temporary stenosis may thus arise. BEHRING has found that inhalations of a saline solution will usually allay the distressing symptoms arising in this manner and render an operation unnecessary in the majority of such cases. KOSSEL also refers to the fact that where an operation is required for laryngeal stenosis the membrane never continues to spread downwards as so often happens with our old methods of treatment.

Equally striking is the effect of antitoxine upon the general condition of the patient. The temperature in an uncomplicated case rapidly falls, accompanied by a corresponding decline in the pulse rate. When such is not the case KOSSEL says it is an indication that some complication is present.

As media for culturing the LOEFFLER bacilli I have used blood serum and glycerine agar. The latter is the easier to obtain. I have found that the temperature of the back of my coal stove is usually about 98° Fahrenheit thus serving nicely as an incubator. The agar is dissolved, poured into a petri dish, and allowed to harden again. The dish is then inverted twenty-four hours when the surface of the agar is found quite free from water, it having collected in the cover. The agar is then inoculated, placed in the incubator, and in twenty-four hours the growth examined. For staining the bacilli I use a mixture of one part of a concentrated alcoholic solution of fuchsin or methylene blue, and ten parts of water.

MEDICAL LEGISLATION FOR THE PREVENTION OF BLINDNESS.*

BY D. MILTON GREENE, M. D., GRAND RAPIDS, MICHIGAN.
OPHTHALMIC AND AURAL SURGEON TO BUTTERWORTH AND UNION BENEVOLENT ASSOCIATION HOSPITALS; EYE, EAR AND THROAT SURGEON TO HOLLAND HOME FOR THE AGED; LECTURER TO BUTTERWORTH AND UNION BENEVOLENT ASSOCIATION TRAINING SCHOOLS FOR NURSES; MEMBER THE AMERICAN MEDICAL ASSOCIATION, MICHIGAN STATE MEDICAL SOCIETY, GRAND RAPIDS ACADEMY OF MEDICINE, GRAND RAPIDS MEDICAL LIBRARY ASSOCIATION, ET CETERA.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

CONSIDERATION of the subject of medical legislation for the prevention of blindness naturally leads us to inquire: (1) What are the causes of blindness? (2) In what degree is it preventable? (3) What are the means for its prevention?

The causes of blindness are very numerous, but in so far as they relate to causes preventable through legislation, we are brought at once to the consideration of a disease which to you may seem trite and commonplace, but when we are confronted with statistics proving the apalling fact that in the United States there are over fifty thousand blind, from forty to fifty per cent. of whom have lost their sight through ophthalmia neonatorum, and when I tell you that in the past five years in this city, I have known, as the result of this disease, no less than six infants who have lost their sight, besides many whose eyes have been scarred and their vision impaired, all through neglect and improper treatment, you will agree with me that there is something yet to be said upon the subject, and that something should be done for its prevention.

Statistics prove that from twenty-five to forty-six per cent. of all blindness in the world is caused by ophthalmia neonatorum. These statistics are made up principally from blind asylums and, therefore, do not represent a fair proportion of the destruction of eyes by this disease. Infants, who are most liable to be affected by blennorrhea neonatorum, are born among the poor, are badly nourished, and many of them die within the first few weeks and no account of their blindness is obtainable. Infants dying under one year of age average one-third of the whole number born, and thirty-three per cent. of the remainder die before they reach the fifth year. It would naturally follow that many blind children have died before arriving at a proper age to enter a blind asylum. Therefore, the estimate that over fifty per cent. of the blindness is due to ophthalmia neonatorum is not exaggerated. In the light of our present knowledge, we must agree that of the fifty thousand blind in the United States to-day, ordinary treatment as practiced by oculists, if thoroughly carried out and the patient seen early in the course of the disease, would have saved twenty thousand from going through their lives shut out from the light of day (and with perfect eyes), and would have saved no less than five thousand more with useful vision. These twenty-five thousand people, who now have to be supported almost wholly by charity and are a burden upon the people and tax-payers, could have been taking care of themselves and enjoying the light of the world, but through neglect of incompetent nurses and midwives, who had the care of them in infancy, or from the proffered advice of some would-be friend or neighbor, they have lost their sight from ophthalmia neonatorum.

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*Read before the GRAND RAPIDS ACADEMY OF MEDICINE.

This brings us to the consideration of prophylaxis and what can be accomplished thereby. This is variously estimated by men of good ability, but it is fair to say that much can be done by obstetricians, which fact was first brought to the notice of the profession in 1808 by GIBSON. That he understood the indications, is shown by his propositions which were made before the birth of our knowledge of bacteriology or antiseptics, and even before the discovery of carbolic and salicylic acids as antiseptics. He quite thoroughly covered the ground when he said: "Control the vaginal discharges as early as possible during pregnancy. Remove the injurious secretions from the vagina at the time of delivery. After delivery thoroughly clean the infant's eyes immediately with some fluid which shall remove the injurious material and prevent its action." All that has been accomplished since that time has been along the line of GIBSON'S suggestions. BISCHOFF suggested the use of carbolic and salicylic acids in 1875. SCHISS proposed that midwives should disinfect the eyes immediately after birth, in 1876. In hospitals and among practitioners in large cities these suggestions have been carried out with the effect of materially reducing the percentage of cases of ophthalmia neonatorum, but in spite of this precaution many disastrous cases occurred and are still seen resulting from this disease. In case pyosalpinx coexist, or in cases of long continued labor in which poisonous secretions are liable to form in the canal, vaginal douching will not be sufficient to prevent ophthalmia neonatorum.

In many cases the eyes are infected by washing them with the same napkin or sponge used in cleansing the body of the child. Other cases are infected after birth by secretions lodged in the eyelashes or upon the edges of the lids. Others are infected by the vaginal secretions or lochia. Precautions should be taken by the physician to carry out the best prophylactic treatment known to the profession, but under the strictest precautions that can be carried out in the practice of the obstetrician outside of hospitals it will be impossible to prevent the occurrence of some cases of this disease.

When CREDÉ announced to the profession the efficiency of a solution of nitrate of silver dropped in the eyes immediately after birth, as a preventive of ophthalmia neonatorum, it was hailed with great joy, but subsequent experience has proven that like other remedies it has failed to meet the highest expectations of its advocates. Moreover, it seems useless as a routine treatment, and, in fact, is so considered by many ophthalmologists. Among general practitioners, except in large cities, it is seldom practiced. I have seen numerous cases in which the nitrate of silver treatment of CREDÉ had been carred out with very little success. All doing well, the doctor had ceased his visits on the second or third day after confinement, and perhaps on the fourth or fifth day, or even later, secretions began to form in the eyes and developed into a severe case of ophthalmia neonatorum before the physician was notified. Such cases usually fall into the hands of nurses, midwives or some neighbor who tells the mother "It is nothing;" that "It is only the sore eyes of infants," and advise her to employ mother's milk, dropping it into the eyes, or some other useless or harmful agent. The case goes along, maybe only twelve or twenty-four hours, when the eyes are in a hopeless condition and beyond the reach of the most skillful treatment, when but a few hours before they could have been saved.

This brings us to the consideration of what can be accomplished by timely and proper treatment. It is not my purpose to detail the various forms of treatment practiced and recommended in these cases for the literature of the subject is abundant in medical journals and it has no place in this paper, but I shall briefly indicate what has been done by treatment as practiced by the profession. DOCTOR S. C. AYRES, of Cincinnati, has made a comparative study of two series of one hundred cases each. The first is a series of one hundred cases treated in private practice. Forty-two per cent. of this series had corneal complications when first seen by him which resulted in impairment of sight. Fifty-eight per cent. had no corneal complications at the first visit. Of these cases not one had corneal complications during treatment. The second series was that of one hundred cases treated in a hospital. No case of this last series had corneal complications at all. The treatment used by DOCTOR AYRES was such as oculists usually employ. He used either alum or argentum nitrate, two grains to the ounce. We have all seen cases resulting badly under the use of these remedies in inexperienced hands. To what, then, shall we attribute his success? I think anyone who has had to treat cases of ophthalmia neonatorum, especially the severer forms, will agree with me that it is no easy task to thoroughly cleanse the upper cul-de-sac, especially where there is much swelling of the lids. It takes a deft hand to accomplish thorough cleansing out of the pus without injuring the cornea or conjunctiva. Few nurses will be found capable, unless they have had special training and practice in such cases. The duty must then devolve upon the doctor if it is to be properly done, and this is the all-important point, *namely, thoroughly cleanse the eyes from pus; do it frequently, being careful not to injure the cornea by manipulation.* In my practice, a case of corneal complication or ulceration has never occurred during treatment. If the cornea was not ulcerated or infiltrated at the first visit the case recovered without injury to sight. I would not say, or be understood by these remarks as meaning, that all cases seen thus early will recover. The late experience of DOCTOR B. ALEXANDER RANDALL and several others of noted ability would disprove such conclusion, but to speak safely, I would say that ninety-eight per cent. of all cases of ophthalmia neonatorum can be cured if seen before corneal complication has occurred, and proper treatment is carried out. If this be true, you may ask, why are so many blind by this disease? The answer is that in large cities midwives attend at least one-third of all the cases of childbirth and when the baby's eyes become sore they prescribe mother's milk, salt solution, hamamelis or something worse to be dropped in the eyes, or poultices of various kinds to be applied, and in twenty-four hours, in many cases, the eyes are in a hopeless condition; or some neighbor woman prescribed the remedies above mentioned, and the doctor who was in attendance at confinement, is not notified until the eyes are sloughing.

LEGISLATION.

What can be done by legislation to prevent this wonderful sacrifice of eyes? Many cases of blindness resulting from other causes than ophthalmia neonatorum could be prevented by timely and proper treatment but they are of such a nature as to preclude the possibility of their prevention by medical legislation. Ophthalmia neonatorum, on the other hand, can be reached by medical legislation and much good accomplished, for the following reasons:

(1) When a disease is so serious as to be the subject of special legislation, it will at once attract the attention of the laity and bring them to the conclusion that infantile sore eyes is not a thing to be neglected or to be prescribed for by people who have no medical education.

(2) A proper act would force midwives and nurses to take proper steps in such cases to bring them to the notice of some one more competent to treat them and would put upon them a responsibility which would deter them from taking the risk of treatment upon themselves.

(3) It would place physicians in such a position before the people and the law that they would be stimulated to more thoroughly acquaint themselves with the proper treatment of such cases and would make them more careful to carry it out in detail, and as thoroughness in carrying out the prescribed rules of treatment is an important factor in curing these cases, much good would result from such an act.

No fixed treatment will apply to the treatment of all cases of ophthalmia neonatorum, therefore, one must become familiar with the different phases of the disease to know what treatment will be most efficacious in any particular case.

I will not take time to review all that has been done in various countries in the way of legislation for the prevention of blindness, but suffice it to say that as early as 1865 legislation was enacted for that purpose in Switzerland. **Professor Horner** inaugurated the movement curtailing the liberties of nurses and midwives with the effect that he lived to see the time when no child was admitted to the blind asylum at Zurich made blind by ophthalmia neonatorum. Many countries have seen the necessity of similar laws and have enacted them. **Doctor Lucian Howe**, of Buffalo, was the first to inaugurate a movenent of that kind in this country. He brought the American Ophthalmological Society in 1887. The society appointed **Doctors Howe, Joseph A. Andrews** and **Swan Burnett** a committee to report on the causes and prevention of blindness. This **Doctor Howe** did in 1889 in a paper before that society with the recommendation that the committee on legislation formulate a law that would require nurses and midwives to report at once to some legally qualified physician. A bill was passed at the next session of the legislature of New York, the first section of which read, "Should any nurse or midwife 'notice' that one or both eyes, et cetera." No conviction could occur under such a law for the nurse or midwife would invariably say *they did not* "notice". In 1891 the first law was repealed and the following enacted:

"Being a midwife, nurse or other person having the care of an infant within the age of two weeks, neglects or omits to report immediately to the health officer or to a legally qualified practitioner of medicine of the city, town or place where such child is being cared for, the fact that one or both eyes of such infant are inflamed or reddened whenever such shall be the case, or who applies any remedy therefor without the advice, or except by the direction of such officer or physician, et cetera."

The violation of this statute is punishable as a felony, and it is the duty of the district attorney to institute proceedings in the name of the state and without any cost to the persons making the complaint when on application to him he brings the facts before the grand jury.

Several states now have similar laws, Rhode Island, Maine and others, and bills have been introduced looking to such legislation in Illinois, Ohio, Minnesota, Pennsylvania, and by several other states, I am informed. I believe that if we had a law similar to that in New York, requiring anyone having the care of an infant, in the first three weeks of its life, to report to some competent physician within six hours of the appearance of any swelling of the lids, formation of matter or secretion or mucus in the eyes or upon the edges of the lids, or any soreness or redness of one or both eyes, the percentage of blindness would be very materially reduced.

It is the duty of every physician to take an active part in trying to bring about such legislation. None but physicians understand the gravity of the situation; therefore, we as humanitarians must intercede and try to save for the helpless infants the most precious of all their functions, their sight, for they are unable to help themselves.

A REVIEW OF THE VITAL STATISTICS OF MICHIGAN.

By G. H. CATTERNOLE, M. D., Lansing, Michigan.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

"The Twenty-Sixth Annual Report of Vital Statistics of Michigan, for the year 1892," has been distributed by the Secretary of State. Secretary Gardner has been exceptionally fortunate in having as Chief of Vital Statistics, Doctor C. L. Wilbur, whose ability to deal with this abstruse subject is demonstrated by the plain, concise and elegant way in which the matter is presented, both in the text and in the arrangement of tables, maps and diagrams, many of which are new features in this report, and give additional interest and utility to the work.

The births, deaths and marriages which occurred in Michigan in the year 1892, have been very carefully compiled, and while the work is accurate in every detail, so far as the material for its compilation would permit, yet it is argued with much force that the present system of making returns of births and deaths is very faulty, and that reliable and accurate statistics cannot be obtained in this state under the present system of registration.

The law requiring a license for marriage in this state insures very perfect returns of marriages, but as the immediate registration of births and deaths is not required by law, they being enumerated only by the supervisors or assessors, at the time of making the annual assessments, the returns are necessarily very imperfect.

In this report a new and valuable feature is introduced in the form of a chapter giving the statistics of the cities of the state. In Detroit and Grand Rapids, where deaths are registered immediately upon their occurrence, it is found that the reported death-rates are much higher than that of the state, showing that the returns for the latter are incomplete. The statistics of these cities are valuable, also, for comparison with the returns from cities in other states, having climatic conditions similar to those of the Michigan cities, and in which the death-rates should be about the same. Comparisons have not been possible before, as no data relating to the cities of Michigan have ever appeared in the state registration reports.

It is urged in this report that the next legislature adopt a better system for the registration of births and deaths. Immediate reports should be made by physicians, midwives, or persons in charge of all births and deaths, the registration being made with the health officer, city clerk, or clerk of the city board of health. Such person should be a regularly appointed registrar, whose duty it shall be to make prompt returns to the central registration office. "The registrars should receive adequate compensation for their work and be subject to suitable penalties for neglect or fraud in its conduct."

At the meeting of the State Medical Society at Lansing, in May, 1894, a committee was appointed to formulate and present to the next legislature such a bill as it thinks will insure proper returns of births and deaths. It is expected that this committee will be supported in their work by a committee from the State Board of Health.

In the "Introductory Remarks" it is shown how much more valuable vital statistics become when "the data collected by a state are so arranged that comparisons may be readily and accurately made with the corresponding data collected by other states and countries." Michigan was a pioneer state in the work of collecting vital statistics, but the old registration law, passed in 1869, having remained unchanged to the present time, is in a very unsatisfactory condition. It is asserted that "as a result of the imperfect method of collection of these data probably not more than sixty per cent. of the true number of births and deaths that actually occur are properly returned and placed upon record." This gives such a poor showing that "Michigan was not even included in the list of 'Registration States' according to the mortality report of the last United States census, and their sole value seems to be for comparison with other, and presumably equally defective, returns for previous years in Michigan."

In the six New England States the physician makes returns to the township clerk, and he in turn reports to the central office. The returns in the New England States were considered more perfect than the United States census, so that special enumeration of births and deaths were not taken in those states. Very satisfactory returns were also made in the states of New York and New Jersey. In New York, where deaths are returned by physician's certificate, the State Board of Health publishes a monthly mortality report or bulletin, which is a very valuable aid in the study of the causes of death in that state, as it shows what diseases are most prevalent in different parts of the state; the relations of climatic conditions to certain diseases; and, incidentally, the efficiency of local boards of health in the restriction of infectious diseases.

Another commendable feature in this report is a new arrangement of tables of causes of death, in which the important diseases are given due prominence. By cutting out many indefinite causes of death used in former reports the compiler has made these tables less confusing, and many of the discrepancies due to the use of different names for the same disease, which were found in former reports, disappear. The three principal tables cover altogether some fifteen pages, in place of nearly fifty pages in the reports of previous years.

Many objectionable terms for the causes of deaths are still employed, as "dropsy," which was given as the cause of 389 deaths in Michigan in 1892, and "heart failure," which was assigned to no less than 368 cases. So long as the returns are made by persons not having a knowledge of medical terms, we must not look for any marked reform in nosology. It is hoped that returns will soon be made by physicians, and that a national system of classification of causes of death will soon be adopted which will enable exact comparisons to be made for different states, an impossibility at the present time.

The two most important communicable diseases in Michigan — consumption and diphtheria — are given the special attention which they deserve, there being a map of the state for each, showing the distribution of the diseases, by counties, for the five-year period 1888–92; and also instructive diagrams showing the fluctuations in the mortality from these diseases, during the twenty-four years, 1869–92.

A plea is made in this report to the medical profession and all persons interested in the study of vital statistics for their influence and support in the attempt to secure a law which will insure better returns of births and deaths in Michigan, and to the physicians of the state in particular for their personal aid in the correct and scientific naming of the causes of death.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, NOVEMBER 26, 1894.

THE PRESIDENT, EUGENE SMITH, M. D., IN THE CHAIR.
REPORTED BY LUTHER S. HARVEY, M. D., SECRETARY.

REPORTS OF CASES.

DOCTOR MULHERON: Last April a young married woman ceased to menstruate. In July I was called to attend the patient for a swelling in the right hypochondrium. The uterus showed evidence of impregnation but was irregular in contour. Clots had been thrown out, subsequently found to be placental in nature. Ten weeks after the menses had ceased, a violent pelvic inflammation developed. The inflammation subsided in a short time. There was no acute pain, but the patient experienced a sense of uneasiness. About a week ago I advised an operation. I supposed that the woman had miscarried. I operated last Wednesday and removed this mass. This I take to be a remnant of the fetus, and the case one of tubal pregnancy. I found the mass extending down to the posterior cul-de-sac. The adhesions were very firm and the growth had to be scraped out with the finger nail. The patient is doing nicely. There has been no rise of temperature and the promise of recovery is good.

Doctor Maass exhibited a specimen of carcinoma of the gall-bladder; also a gallstone composed entirely of cholesterin, removed post-mortem.

Doctor Jennings asked the members to assist him in procuring a suitable case of diphtheria for experimentation with **Behring**'s antitoxine. The doctor exhibited a small vial containing the fluid.

Doctor Jenks invited the society to attend the opening of the Eruptive Diseases Hospital.

Doctor Carstens moved that the invitation be accepted. Carried.

STATED MEETING, DECEMBER 3, 1894.

The President *pro tempore*, A. P. BIDDLE, M. D., in the Chair.
Reported by LUTHER S. HARVEY, M. D., Secretary.

EXHIBITION OF SPECIMENS.

Doctor Walker exhibited a portion of a prostate gland he had removed by operation. The patient was fifty-eight years old and was troubled with difficult urination. He had urinated one hundred and fifty times in one day. By examination I found that the urethra was covered by a large mass. I made the suprapubic operation, and dissected out the major portion. The operation was performed five days ago and the temperature has not been above 99°. The patient is doing very well.

DISCUSSION OF PAPERS.

Doctor Walker read a paper entitled "The Surgery of the Gall-Bladder."

Doctor Carstens: It seems to me that little can be said by way of enlarging upon **Doctor Walker**'s paper. He has certainly covered the ground very well. One point he did not mention is the removal of the gall-bladder. Another point, if we remove gallstones by stitching to the abdominal wall, we may have to operate again. Cases vary so much that we may start out to do a certain operation and afterwards find it impossible to carry it out. We must then vary the operation to suit the case. Sometimes nature remedies the trouble by forming an inflammatory anastomosis between the gall-bladder and the intestine. The diagnosis is not easy. Many persons have gallstones without any biliary colic or other symptoms. I know of no diagnostic point, but the *tout ensemble* convinces one that the patient has that trouble.

Doctor Maass: I have seen many operations for gallstones, and consider the operation a very difficult one. The results obtained in the operations I have seen have been far from satisfactory. I have some doubt as to the advisability of operating for this trouble.

Doctor Walker: Some of the operations are not successful, but the anastomosis between the gall-bladder and the intestine is attended with good results.

Here followed a discussion on the action of the board of health in closing the public schools on account of the so-called diphtheria epidemic. No action was taken.

STATED MEETING, DECEMBER 10, 1894.

THE PRESIDENT, EUGENE SMITH, M. D., IN THE CHAIR.
REPORTED BY LUTHER S. HARVEY, M. D., SECRETARY.

DISCUSSION OF PAPERS.

DOCTOR TIBBALS read a paper entitled, "The Theory and Practice of Medical Ethics." (See page 1.)

DOCTOR CARSTENS: I think the doctor has summed up the whole truth of the matter in the last three or four lines of his paper. I do not think we have any of the unprofessional men he describes in this city. The doctor takes a very pessimistic view of the matter. I think there are very few of these men anywhere. This class of men soon run themselves out. I do not know of any consultant who would steal a case from the physician who called him. Sometimes the consultant is obliged to take the case. There are instances in which it cannot be helped. The family insists upon retaining the consultant and it is perfectly right. The consultant who would steal cases would soon be found out. As far as having one's name in the paper is concerned, I do not think it is unethical to furnish one's opinion on matters of public interest. Those who use the papers for advertising purposes are very few. The code of ethics should be taught in our medical colleges. Young men are apt to judge too severely when they are supplanted in cases by older physicians. If we did not judge so hastily we would not have so much trouble. Many cases of apparent unprofessional conduct are unintentional and admit of easy explanation. The whole code may be boiled down to the golden rule. I know something of the feeling existing among medical men in various parts of the country, and I think that the profession is more harmonious in Detroit than in any other city in the country. It is to be regretted that the laity cannot understand our code. They do not seem to grasp the spirit of it. The newspapers help to prejudice the public against it. The newspapers are against the profession because they do not get anything out of it. I was very much interested in the doctor's paper and agree with him in many points, but I think he has painted the picture altogether too dark.

DOCTOR SAMSON: I wish to remark on the high literary quality of this paper. It is often said that a medical man knows nothing but medicine, but the doctor seems to have found time to acquire a literary as well as a scientific education. It seems to me that a man who is capable of originating such an excellent literary production as we have listened to to-night would find a keener appreciation of his genius in other fields than in the wearying practice of medicine. I have seen a great many consultations, and have known a great many skallawags. **DOCTOR CARSTENS** has said a great many astounding things in his astounding way, that I cannot fully agree with. I do not agree with **DOCTOR CARSTENS** that the consultant has a perfect right to take the case if he and the family agree. That is a thing I have never done. As regards the newspapers, my first experience a long time ago settled the question for me. One of my first operations, a simple one, was performed with the assistance of another young physician, who had called me in consultation. The next day I was astonished to see a full and extended account of a most difficult operation in our local paper. My confrère had furnished the data. I thereupon requested the papers of the district never again to publish my name without my permission, and from that day to this my name has never appeared in public print in either of the papers of my district. The older men set a very bad example in allowing their names to be used in the papers.

Doctor Anderson: It seems to me that **Doctor Carstens** is as optimistic as **Doctor Tibbals** is pessimistic. As one of the younger members of the profession, I think we have a right to complain, many times, of the conduct of the older men. I agree with **Doctor Carstens** that it is the privilege, yes, even the duty, of medical men to influence the public at times through the medium of the press; but I cannot approve of the position taken by some of the older men, when they allow their cards to appear in the advertising columns of the daily press, especially after this association has, by a vote, declared it to be against the best interests of our profession. Some of the older members of the profession do the younger members an injustice by cutting prices. It does not seem to me right for the older men to underbid the modest fees of the young physician. I do not wish to be hypercritical or to make too sweeping statements against the older men, for I believe we have many noble men in our profession. The younger men do not ask for charity; they simply ask for fair play; and many times they do not receive it from the hands of some members of our profession.

Doctor Collins: There is a great difference in men. One man will come to your patient and not say very much, but will leave the impression that you possibly have not done any harm; that you have done the best you could, which was not very much. Another will come and make you and the family feel that you have done quite the proper thing, and will make suggestions in such a way that it will seem to quite accord with your ideas of the case. I do not agree with **Doctor Carstens** that the consultant has a right to take the patient. I believe that **Doctor Samson** has expressed the whole gist of the matter in his honest expressive way.

Doctor Miner: I think that the subject of medical ethics is one that is well for us to consider, but it is almost impossible to form a code to govern a large number of men without finding some who will not submit to it. In this discussion in regard to consultation I think we have been losing sight of the patient. The welfare of the patient should be the first consideration. It is the duty of the attending physician to carry out the advice of the consultant. If this is not done, the consultant has a right to step in and see that the best possible is done for the patient.

Doctor Sherrill: In our relations with our patients we should discriminate between office and house patients. Office cases seem to be received whether they have been in the hands of other physicians or not. I think we should make inquiry in new house calls, as to whether a physician is treating the case. There are some cases in which the attending physician has been in very grave error. In those cases he should be supplanted.

Doctor Longyear: It seems to me that the consultant is called to counsel with the attending physician and not to counsel with the family, and when he has done that he should step down and out. He should give his counsel to the physician and not to the family.

Doctor Carstens: When I spoke of the right of the consultant to take the case, I referred to the abstract right. I do not consider it a matter of policy, and have never done it myself.

Doctor Tibbals: Concerning the reference which our honored and esteemed president has spoken of, let me say that my paper was written fully two months ago before the articles in which **Doctor Smith** figured were published, and if the remark alluded to was inspired by anything whatever, it was by something occurring in a paper published outside of Detroit. I devoted a great deal of time and thought, gentlemen, though perhaps my paper does not show it, in the endeavor to render it absolutely unpersonal. I have no old grudges to work off, no grievances to air. I do not think, however, that I am pessimistic, I have normal vision. I read the medical press. I have not said that these typified abuses exist here, and I assuredly should not say so after the beautiful picture of our medical utopia which **Doctor Carstens** has drawn for us. These evils do exist wide-spread throughout the country, if not here. The abuse of the consultant's privilege, the dispensary evil, cutting of prices, and the other types given are all genuine *fac similes*, and almost every medical journal is full of articles and editorials concerning them. I am much gratified that so large a number have braved a very stormy night to hear my paper, and that it has drawn out so free a discussion. I appreciate highly the very kind compliment which **Doctor Samson** has paid me in intimating that the writer of such a polished (?) paper seems fitted for better things than the wearying practice of medicine, and will say in explanation of my brilliancy and learning that I was originally designed by my mother for the ministry.

GRAND RAPIDS ACADEMY OF MEDICINE.

STATED MEETING, DECEMBER 10, 1894.

The President, AUSTIN J. PRESSEY, M. D., in the Chair.
Reported by LOUIS A. ROLLER, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor J. B. Whinnery read a paper on the "Diagnosis and Treatment of Diphtheria," the following being an abstract thereof:

Diphtheria is a specific, infectious disease whose cause is now admitted to be the **Klebs–Loeffler** bacillus. The appearance of the local infection and the constitutional effects caused by this bacillus are, as a rule, sufficient for a diagnosis. Yet, a systematic bacteriological examination of all cases is of great aid in the diagnosis of the disease. No one can diagnosticate diphtheria with certainty by simply inspecting the membrane. **William H. Park** and **Alfred L. Beebe** make a report, in *The Medical Record*, of September 29, 1894, which shows conclusively the importance of such examination in suspected cases of diphtheria. These men subjected 5611 cases to bacteriological examination and found the **Loeffler** bacillus in 3255 of them.

The **Klebs–Loeffler** bacillus is always found in the diphtheria pseudo-membrane, and in very small numbers in the lungs, liver, spleen, and cervical and bronchial glands, but is never present in the blood. The variation in virulence of this germ is said to be greater than that of any other germ. Probably this accounts to some extent for the difference in severity in cases of diphtheria. Very frequently other bacteria appear in connection with the LOEFFLER bacillus. Of these the streptococcus pyogenes is said to occur more frequently. Septic signs in diphtheria, due to putrefactive processes, are produced by bacteria other than the bacillus of diphtheria.

Until recently, the treatment of diphtheria has been an empirical one depending upon local disinfection and means applied to overcome constitutional intoxication. The antitoxine treatment which is now attracting such wide-spread interest depends upon the immunity artificially gained by the injection of blood serum from some animal rendered immune by gradually increasing doses of the toxalbumin of diphtheria. Probably the action of the antitoxine does not depend directly upon products of the bacteria, but rather modifies the organism and enables it to resist the poisons of the disease.

In April, 1893, BEHRING and KOSSEL reported thirty cases of diphtheria treated with blood serum with eighty per cent. recoveries.

In April, 1894, EHRLICH, KOSSEL and WASSERMAN reported on 220 unselected cases of the disease treated by hypodermic injections of blood serum obtained from goats and rendered immune by giving them increasing doses of dead diphtheria cultures. In six cases treated on the first day there were no deaths. In sixty-six cases treated on the second day ninety-seven per cent. of recoveries were obtained. In twenty-three cases treated on the fourth day the per cent. of recoveries was fifty-six and one-half.

This proves the necessity of an early treatment. Of all animals capable of furnishing large quantities of diphtheritic serum the horse is the easiest to render accustomed to the toxine of diphtheria, and the one most generally used for this purpose.

Before treating children with this serum the efficacy is tested upon animals previously inoculated with diphtheria. The amount injected varies. ROUX used twenty cubic centimetres at first, and ten to twenty cubic centimetres twenty-four hours later. Others have used smaller amounts.

The age of the patient, duration of the disease, and the severity of the case, must all be taken into consideration in determining the dose to be given.

The principal facts noted, in regard to this treatment, are: the general condition remains good or improves, provided the treatment is commenced early enough; the expression of the child is more lively and cheerful; the duration of the disease is shortened; the appetite quickly recovers; the wasting is slight; the complications following the disease are not so common; the false membrane ceases to grow in twenty-four hours after the first injection, and usually detaches itself in thirty-six to forty-eight hours; the bacillus disappears in a short time; the temperature falls promptly, and albuminuria is less frequent and of shorter duration.

The local treatment consists of strict attention to cleanliness and the use of a mild wash of boracic acid or Labarraque's solution. The prophylactic efficacy of antitoxine serum for diphtheria lasts for only a short time, probably but a few weeks at the largest. The three best known antitoxine preparations—those of BEHRING, ARONSON and ROUX—vary in strength. ARONSON'S is said to be much stronger than BEHRINGS. It is to be hoped that before very long, in our own country, will be manufactured a standard article of known strength under the direction of a national commission.

The results of the treatment in cases of mixed infection are not so good as in those of simple Loeffler bacillus infection. But the many statistics at hand prove that the antitoxine method reduces the mortality in cases of diphtheria at least one-half and leads us to believe that in it we have a very promising agent for the prevention and cure of this disease.

Doctor H. W. King: The subject of diphtheria interests all practitioners. In view of the fact that antitoxine is not manufactured here we have to adopt old methods of treatment. We all know when the nasal passages are affected the case is apt to be a serious one. According to Jacobi, swelling of the glands at the angle of the jaw is a sure sign that the nasal passages are affected. Post-diphtheritic indurated glands are a constant source of infection. No amount of sulphur or carbolic acid will render a room free from contagion. All bedding should be destroyed, walls scraped and floors painted. Other children should be isolated, and every precaution taken to prevent spreading of the disease.

Doctor Eugene Boise: How long will the bacillus retain its virulence in a room?

Doctor King: The bacillus may live three months. I do not know how much longer.

Doctor D. M. Greene: It is well known that enlarged tonsils filled with vegetable and animal matter furnish soil for the development of all sorts of germs. Enlarged turbinated bodies and adenoids in the vault of the pharynx, are also a source of danger. The enlarged turbinator should be treated and adenoids and enlarged tonsils removed. Diphtheritic membrane does not appear where the tonsils have been removed. I would apply muriate tincture of iron, full strength, to the throat, also to the nasal cavity if membrane were there. I believe in forced feeding.

Doctor H. Hulst: I have drifted into a routine treatment which has proven satisfactory. I give internally corrosive sublimate and make local application or spray of papoid and peroxide of hydrogen, using it every half hour.

Doctor C. E. Patterson: Sometimes the membrane will clear up, and in two or three weeks after, the child will die suddenly from heart paralysis. This fatal result will not occur if we give our case enough quinine to produce cinchonism in the first two or three days. I apply a solution of persulphate of iron to the membrane.

Doctor S. A. Whinery: Diphtheria patients should be kept quiet. They should lie down. Rest is important so as not to overtax the heart.

Doctor R. Peterson: It would seem that were quinine a remedy for diphtheria it would not be difficult to manage the disease. Treatment by drugs is very unsatisfactory. We should have some means of ascertaining whether or no our case is one of diphtheria. We must hail with joy the advent of antitoxine. The presence of streptococci adds greatly to the danger of the case. The academy should take action in this matter and the Board of Health should furnish a means of examining their cases.

Doctor E. Watson: I attended a family where diphtheria had occurred. This family vacated the house, and two years afterward another family took possession and diphtheria appeared, the disease evidently having been contracted from germs that remained in the house during the intervening period. Our schools are a source of contagion. I fear antitoxine may prove a failure but will try it. Patients should be kept quiet and not allowed to get up too soon.

Doctor J. H. Innis: Epidemics are apt to come in a warm winter when we are prepared for cold weather. Decayed vegetable and animal matter breed the germs of diphtheria. Our cellars and houses should be kept well aired and ventilated.

Doctor A. J. Patterson: In the treatment of diphtheria there are three indications to be met: the poison due to ptomaines, rapid pulse, and paleness. To meet these indications I give iron, stimulants, and bichloride of mercury. Bichloride is of no use unless given in large doses. To an adult give one-eighth of a grain every two hours; to a child one-thirtieth of a grain, and if there is no improvement in twenty-four hours the dose is doubled, and increased until improvement takes place.

Doctor Watson, in referring to sudden deaths in diphtheria, said the cause was usually attributed to paralysis, but he did not believe it generally due to such cause. He thought such deaths due to muscular weakness of the heart, and that a mistake is made in treating diphtheria, as is also made in some other acute diseases, which is, that we may be deceived in the condition of the patient by seeing him in a state of quiescence. Before leaving a patient, we should be assured of the character of the pulse, or the heart's action, when the patient is sitting or standing. He said many cases of diphtheria, if treated soon enough, may be averted by local treatment, and that many agents may be successfully employed for that purpose. He referred to the treatment of diphtheria by antitoxine, and said he would be one of the first to try it, but that he expected no practical results from that source.

Doctor Collins H. Johnston's remarks on this paper appear on page 4.

STATED MEETING JANUARY 7, 1895.

The President, AUSTIN J. PRESSEY, M. D., in the Chair.
Reported by LOUIS A. ROLLER, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor D. Milton Greene read a paper entitled "Medical Legislation for the Prevention of Blindness." (See page 8.)

Doctor Roller: **Doctor Greene** has given us a very able paper, has covered the ground thoroughly, and I can only emphasize what he has said on the importance of the subject. It is certainly something that we should take an interest in, and use our best endeavors with the members of the legislature to have such a bill enacted as has been enacted in several of the states and in Europe. As the doctor says, for years oculists have noted the causes that have produced blindness and ophthalmia neonatorum. **Professor Magnus**, of Breslau, in reporting something over 2,500 cases of blindness, has found that a little over three per cent. are born blind, about sixty-six per cent. are due to primary diseases—either ophthalmia neonatorum or granulation of the lids, about ten per cent. are due to injuries, and about nineteen per cent. due to other diseases. We cannot prevent blindness entirely; we cannot prevent children from being born blind and from becoming so from accidents. If people would adopt proper measures to protect the eyes, a great deal of blindness from accidents could be prevented by wearing protective goggles. The paper deals largely with ophthalmia neonatorum. Twenty-five to fifty per cent. of the cases of blindness are due to this cause alone. This disease can be largely prevented by proper legislation. I have a little more faith in the use of nitrate of silver than DOCTOR GREENE. I believe that when nitrate of silver is used immediately after birth — dropped in the eyes as CREDÉ recommends — the majority of those cases can be prevented. When CREDÉ has shown that at Leipsic, before the use of nitrate of silver was adopted, in about six per cent. of all obstetrical cases the infants were affected with ophthalmia neonatorum, and after the use of nitrate of silver, the percentage was less than one per cent., it proves how much good the use of nitrate of silver has done. Of course, there are cases that are not benefited by nitrate of silver. We have some cases in which the disease is not shown for five or six days after birth. I do not believe that these cases are infected at birth, but afterward, either through vaginal secretions or napkins, so that if you put the nitrate of silver in the eyes before the child has become infected, it will do no good. The case DOCTOR GREENE refers to, I believe, is of this class. For these cases of blindness midwives are largely responsible because of failure to report to a physician, or, the physician regards it as a mild case of conjunctivitis, caused from a cold, and prescribes the use of mother's milk or tea or something else that does no good. I believe that we ought to do what we can to have a law enacted similar to that in force in New York and Rhode Island, and such as other states are endeavoring to pass. The people certainly cannot claim that this would be class legislation, and it should appeal to the Democrat as well as to the Republican, to the Prohibitionist as well as to the Populist. The individuals to be benefitted by such a law would be the infant and society in general. Of course we would have the use of these infants as they grow up, and they would become wage-earners. In regard to statistics, I think the doctor's figures are a little low. According to DOCTOR B. BETTMAN, of Chicago, there are 17,000 blind, the result of ophthalmia neonatorum. I do not know that I can say any more. I am in sympathy with the movement and would be glad to use my influence in any way that I can to bring it about.

DOCTOR JOHNSTON: It has been definitely proven by ZWIFEL that healthy lochia cannot give rise to ophthalmia, and that the purulent inflammation of the conjunctiva in the newborn is due to the gonococcus of NEISSER. I do not believe that the profession in general appreciate the extent to which gonorrhea is present in women. In some of the German gynecological clinics it has been found that one-eighth of the women applying for treatment have gonorrhea in one or another of its numerous forms; and in 1879 twenty-six per cent. of the women confined in the Leipsic obstetrical clinic had a suppurative vaginal discharge due to gonorrhea. Forty per cent. of the children of these women had blenorrhea. This was before CREDÉ began to use nitrate of silver instillations after every case of labor. If a birth is rapid, if the membranes are not ruptured until labor is far advanced, and if the child's eyes remain closed and are covered with a considerable amount of vernix caseosa, they are quite likely to escape infection. When twins are present, the disease often attacks the first child, as the birth of the second is usually more rapid, and the genital canal is cleared by the passage of the first. If the eyes become infected during labor, they are red and swollen on the second day. Late, or post-partum, infection can occur at any time. The case mentioned by DOCTOR GREENE was one of late infection, and if the faithful and efficient nurse he mentioned was put in charge immediately after birth, the child's eyes would probably not have become diseased. Late infections are due to the carrying of lochial secretion containing gonococci to the eyes of the child by the hands of the mother or nurse. The lochial secretion is a most favorable culture medium for these microörganisms. Some of the large obstetrical clinics which I have visited have given up the nitrate of silver instillations on account of the distress they often cause the babies, and in suspected cases cleanse the vagina carefully with solutions of carbolic acid or corrosive sublimate, and the child's eyes with sterile water. Probably not one prostitute in fifty who has plied her vocation for six months is free from gonorrheal infection, and legislation to regulate prostitution would do much to prevent the spread of gonorrhea and thus decrease the prevalence of ophthalmia neonatorum. The laws of the state compel physicians and householders to report such simple and inoffensive diseases as mumps and chicken-pox; is it not strange that such a contagious disease as gonorrhea, which entails so much misery upon the human race, and which is often more difficult of cure than syphilis, should receive absolutely no attention at the hands of the health authorities. Prostitution, which is so greatly responsible for the prevalence of gonorrhea, is a necessary evil, due not only to moral depravity, but to a physiological function that is absolutely dominant at a certain age. Every prostitute should be registered and sanitary examinations of them made by a competent physician regularly. In this way disease among them could be reduced to a minimum.

DOCTOR BRADY: As I do not want to see a paper of such merit as the one just read go without due consideration, I will offer a resolution concerning it, and I move, MR. PRESIDENT, that the Academy adopt the recommendation of this paper, and that the author be appointed chairman of a committee consisting of three to bring this subject before the legislature of Michigan and request that body to take some action thereon.

DOCTOR JOHNSTON: I support the motion.

Motion carried.

The President appointed DOCTORS GREENE, BRADY and ROLLER a committee on legislation to carry out the recommendations of DOCTOR GREENE'S paper.

DOCTOR FULLER: I never saw but one case of ophthalmia neonatorum in my practice, but have seen many cases of sore eyes. I understood that the case I saw was twenty-four hours old, but when I opened the lids I saw one cornea was entirely sloughed, and it had fallen down and was wrinkled. The other one was of a milky whiteness. I punctured the cornea and the eye was saved with useful vision.

DOCTOR PETERSON: I would like to ask DOCTOR GREENE what he does to prevent the other eye from becoming infected when one is diseased.

DOCTOR S. A. WHINERY: DOCTOR GREENE said it was difficult to reach the upper cul-de-sac of the eye to make the application of nitrate of silver. I would like to know the position in which he holds the child, when he makes those applications, to find that difficulty.

DOCTOR GREENE: In closing the discussion, I will say that my paper could not very well deal extensively with the treatment of ophthalmia neonatorum, neither could it discuss the various forms of treatment in vogue. It is not the purpose of this paper. My aim has been to go over the ground as briefly and concisely as possible; to deal rather with fair conclusions than with theory and speculation. I wish my statements to be the ungarnished truth as seen in the light of our present knowledge, so that should this article get into the hands of some of the members of the legislature, who are not doctors, it might be understood. Doctors can read between the lines. Regarding statistics spoken of by DOCTOR ROLLER, I believe the last census places the figures at upward of fifty thousand blind in the United States. Some estimate the number much greater. DOCTOR HOWE, in a personal letter to me, stated that fifty thousand was a low estimate for the number of blind in the United States. Regarding the nitrate of silver treatment as a prophylactic, I would say that I have much faith in its efficiency when it is thoroughly used. The great trouble seems to be, not in the efficiency of the remedy, but the manner of its application. I believe that harm has been done by its employment. The eyes are reddened and congested and sometimes inflamed by its use. If used with care, I would not object to a two-grain solution of nitrate of silver as a routine prophylactic measure, but to hold nitrate of silver up to the profession as a sure preventive of ophthalmia neonatorum is a piece of nonsense. The prophylactic treatment, as practiced in hospitals by skilled hands, differs very much from the treatment and care by unskilled people or by unskilled physicians. I mean doctors unskilled in manipulation. Perhaps their knowledge is sufficient, but they are careless. The routine nitrate of silver treatment is condemned as useless by some of the best men in our profession. In some cases of ophthalmia neonatorum, cleansing by hot water obviates the use of nitrate of silver. I believe that weak solutions of nitrate of silver tend to stimulate and increase the swelling of the lids, while a strong solution acts as a sedative. Blennorrheæ occurring a week or two after birth, are not the only cases of the disease I have seen following the nitrate of silver treatment of CREDÉ. Several have come under my observation who had a two-grain solution of nitrate of silver dropped in the eyes at birth. Two or three days later the eyes began to show signs of the disease and developed into severe cases of ophthalmia neonatorum. In quoting DOCTOR AYRES I did not criticise his treatment. What I said was to illustrate the difference in results from the same remedies in different hands, and to emphasize the importance of thoroughness, which is of paramount importance in securing success. DOCTOR JOHNSTON refers to disreputable houses, saying that we had better suppress them. The task would be too great for the medical profession to undertake. If we succeed in getting a bill through the legislature that will cause to be reported early cases of ophthalmia neonatorum, that is all we can expect to do. This disease is not confined to the lower classes of society, if virulence is an indication of its being true blenorrhea. A striking illustration of that is reported by DOCTOR B. ALEXANDER RANDALL, occurring in a first-class family where, in spite of every effort and attention on the part of the most skilled physicians, the case went on to destruction and both eyes were lost. As regards puncturing the anterior chamber, referred to by DOCTOR FULLER in a case of his, I can only say that I consider it hazardous in ophthalmia neonatorum to abraid the cornea or conjunctiva. Why his case recovered I cannot say. It would put upon us too great a responsibility to say that all cases of ophthalmia neonatorum can be cured, even when seen early. It might subject us not only to criticism, but, perhaps, to prosecution. All cases do not recover. In answer to **Doctor Whinery's** inquiry as to the position of holding the patient, will say that I hold my patents in various positions. The best position for holding an infant is with the child lying upon its back in the lap of a nurse, who at the same time holds its hands, while the doctor holds its head between his knees. There are some cases, however, in which the swelling is extreme, and it is exceedingly difficult to expose the cornea, or to thoroughly cleanse the pus secretions from the upper cul-de-sac. Answering **Doctor Peterson**, many physicians perfectly seal the well eye. It is seldom necessary except while the eye is being dressed or during sleep. I have found absorbent cotton, smeared with vaseline, placed over the well eye, secured by bandage, very efficient. This, however, is diverging from the subject of the paper.

REPORTS OF CASES.

CASE OF INTESTINAL OBSTRUCTION. CELIOTOMY AND RELIEF OF THE OBSTRUCTION. DEATH IN THIRTY-SIX HOURS AUTOPSY: A GANGRENE OF SEVEN AND ONE-HALF FEET OF THE SMALL INTESTINES.

Doctor Peterson: Last Friday morning I received a telegram from Spring Lake, Michigan, to take the 7 o'clock train for that place prepared to operate for intestinal obstruction. Upon arriving at the patient's house, I received the following history from the attending physicians, **Doctors Phelps** and **Brown**: On the Monday preceding, the patient, a man fifty-three years old, with no history of any previous abdominal affection, was seized with severe pain located near the umbilicus. The doctor, upon his arrival, found the patient in a state of collapse with a rapid, feeble pulse, and a profuse, cold sweat. Prompt and vigorous stimulation was required to bring the patient out of this state. From Monday to Thursday his condition improved somewhat, although the abdominal pain persisted, but was much milder in character. There were occasional attacks of vomiting with constipation, which large and repeated rectal injections failed to relieve. Thursday afternoon occurred a second collapse, from which he recovered only with great difficulty. Thursday morning the abdomen became distended and this condition increased up to the time of my visit at 8 A. M. I found the patient with but very little abdominal pain. Tympanites existed to a marked degree, but the abdomen could be palpated without producing much discomfort. The legs were not drawn up and the countenance did not denote the presence of peritonitis. The pulse was 96, and temperature 100.4° by the rectum. A provisional diagnosis of probable appendicitis with rupture was made, as it was considered improbable that the trouble could have arisen from a volvulus or strangulation and the patient be in such good condition. It was decided to administer some cathartics by the mouth and to give large turpentine injections. The stomach retained what was given very well, and a number of loose fecal evacuations were produced, and the abdomen seemed somewhat softer. Fecal vomiting began, however, during the night, and it was decided best to operate. To show what good condition the patient was in, in spite of the serious abdominal complaint, I will state that when the nurse proceeded to shave his abdomen, preparatory to the operation, he mistook the object for which the razor was brought into the room and sitting up in bed shaved his face with great dexterity. As the pain was now located a little to the left and above the umbilicus, an incision was made through this point, the lower portion extending two inches below the navel. Coils of enormously distended intestines protruded through the incision. In order to prevent them becoming unmanageable, the different coils were pulled up from below and tucked in above. Just above the situation of the head of the cecum was found a ring some two and one-half inches in diameter, the pillars of which were made up of thickened and adherent omentum. Through this ring had been pushed the intestinal coils, and at one point there was a distinctly obstructed portion, above which point the intestine was dilated and below empty. The intestines were all very much congested, and the peritoneal cavity contained a dark bloody serum. No difference in color could be noticed between the portion above and the portion below the obstruction. The pillars of the omental ring were severed, a drainage tube inserted and the abdominal incision closed. The pulse at the close of the operation was 88 and the patient's condition excellent. He did well for about twelve hours, and then the pulse and temperature began to rise, tympanites became more marked, and the patient died thirty-six hours after the operation. At the autopsy, held twelve hours after death, I found that the constricting ring had been severed, but not before the mischief had taken place, as seven and one-half feet of the small intestines, beginning from a point twenty inches above the illio-cecal valve, was black and gangrenous. The intestinal tract above and below this portion was enormously distended. I had feared, prior to the autopsy, from the fact that the bowels did not move freely, that the entire constriction had not been relieved, but the gangrenous gut made the reason clear. Aside from the extensive gangrene present, the most interesting feature in the case to me was the slight effect the peritoneal involvement had upon the patient's pulse.

EDITORIAL ARTICLES.

THE DEAN'S ADDRESS TO THE REGENTS.

MEDICAL affairs at the University have been commented upon in a striking manner in the address recently delivered by the dean of the homeopathic department to the honorable board of regents. While there is much in the dean's address, to which reasonable exception can be taken, the facts and figures he has presented constitute in themselves such a formidable array of evidence, as to the inadequacy, inutility, and expensiveness of the department of which DOCTOR OBETZ is dean that surprise can only be expressed that the regents or other responsible parties have not before this conceived it their duty to lay plainly before the tax-payers these figures, or the inferences to be derived from them.

The homeopathic department began in a request that the legislature should endow a chair of homeopathic medicine. From this beginning a full faculty has established itself. While it is admitted there is nothing in surgery, gynecology, or ophthalmology that can be labelled homeopathic, professors of these arts and sciences have one by one been added to the department, so that duplicate professors expound these subjects upon the campus. In spite of this the present dean attributes some of his present troubles to a promise made a former governor, that the faculty expenses of his department should not be increased.

The address made by DOCTOR OBETZ reviews at some length the history of the homeopathic department and comments upon the present state of medical education in the University. DOCTOR OBETZ shows that the homeopathic department during its lifetime has graduated 309 students at a net cost to the tax-payers, over all receipts from students, of $154,962. That is to say, every student graduated has cost the people of the state $500. Can it be that the state is so urgently in need of doctors that it has to pay this price for their creation?

The regular department of medicine and surgery also offers a fruitful theme to the contemplative statistician. Not only does every student graduated from this department cost the state $169.00, but the teaching of these students is rapidly becoming much more expensive. In 1875 the salary account of the regular school amounted to $16,041.65, and the number of students receiving instruction was 370. In 1894 the salary account had increased 400 per cent., amounting to $48,644, while the number of students remained practically the same, 382, against 370 twenty years ago. In other words the number of students has remained stationary, while the cost of educating them has increased 400 per cent. From these figures but one deduction can be made, either that medical education has become much more elaborate, which is undoubtedly true, or that a tendency prevails, to multiply officers upon the campus beyond the necessities of the situation.

Probably both these causes are contributary, and to remediate the condition that results from them DOCTOR OBETZ suggests amalgamation. By this the duplication of hospitals and professors, made needful under the present arrangements, would cease, and economy be more efficiently pursued. "The fight is only over a name," he says, but then, what name? In one breath he urges the state not to teach sectarian medicine, and then apparently urges the representation of all sects in the faculty—homeopaths, physio-medics, and possibly faith-curists and magnetic men, provided their influence with the legislature be sufficient to secure recognition. The poor student is to be taught non-sectarian medicine by being made to swallow the teachings of all the sects. The regents and the president of the University must determine for themselves, whether such education as this would be worthy the reputation of a great teaching institution.

Probably the safest inference to be drawn from the facts presented by DOCTOR OBETZ is that the state should not undertake professional education at all, but leave the matter to voluntary effort.

EDITORIAL BREVITIES.

THE SUPPLY OF MEDICAL STUDENTS.

PHYSICIANS in the future must expect hard times if the new doctors are to furnish any competition. It is estimated that there are nearly twenty-five thousand medical students at the present time. How are eight thousand physicians a year to be absorbed, in the ranks of successful practitioners? Yet new medical colleges continue to be called for by philanthropic physicians anxious to do something for posterity. Posterity would often be better for being let alone.

THE DETROIT BOARD OF HEALTH.

If evidence were wanting of the incompetence which characterizes the conduct of the Health Board, it has been furnished in the wholesale resignations which have been demanded by Doctor McLeod on his resumption of the duties of Health Officer. It is not right that the blame should entirely repose on the shoulders of Doctor McLeod. Behind him, the power which sits upon the throne, must be recognized as the most culpable. The bill providing for the abolition of the present custodians of public health seems to have a fair chance of becoming law.

OUR INCREASING NERVOUSNESS.

Professor Erb has delivered an address in which he states his view that there has been a clear loss of tone in the nerves of the highly civilized nations. This disorder is something more than hypochondriasis or hysteria, and is marked by increased sensitiveness, weariness, lack of power of endurance, and defective recuperative power. The later development of neurasthenia, however, is not more symptomatic than was the hysteria of a past generation. The race has survived one and probably will the other. Increased insanity and nervous disorder is not a necessary correlation of an increasing complexity of society. Better regulation of life will ensue, and by experience of what is inimical, to sustained life, we shall probably before it is too late, learn what is needful to conserve it.

AN ACT TO ESTABLISH A BOARD OF REGISTRATION IN MEDICINE.

The Detroit Physicians' Protective Association have in hand an act to regulate the practice of medicine in the state. The provisions are similar to those which have been enacted in various parts of the country, and as it fairly endeavors to protect the interests of all parties it is hoped that its passage may be successful. The bill provides for the constitution of a board of examination and registration of nine persons, four to be regular practitioners, three homeopathic, one eclectic, and one physio-medical graduate. All candidates for registration will come before this board and be examined. The prospects for the bill are said to be specially good and physicians in the state are urged to put their representatives in the senate and house on the alert in looking after its interests.

MEDICAL NEWS.

AN EMINENT PHYSICIAN'S DEMISE.

Doctor Alfred L. Loomis died of pneumonia at his home in New York City on the 23d instant, aged sixty-three years. The doctor was born at Bennington, Vermont, on October 31, 1831. He graduated from Union college in 1850, and began the study of medicine in New York City, under the preceptorship of Doctor Willard Parker, receiving his medical degree from the College of Physicians and Surgeons in 1852. He served on the house staff of the Ward's Island and Blackwell's Island hospitals, and later entered private practice adopting as his specialty the physical diagnosis of diseases of the chest. For a time, however, the pursuit of this branch of medicine was abandoned, the doctor meanwhile lecturing on venereal diseases in Charity Hospital, which at present is the City Hospital on Blackwell's Island. In 1862 he accepted an appointment to lecture on physical diagnosis in the College of Physicians and Surgeons. The adjunct professorship of medicine in the medical department of the University of the City of New York was accepted by the doctor in 1866, and subsequently he was elevated to full professorship, which position he occupied at the time of his death. Although Doctor Loomis achieved eminence in the profession the greater portion of his career was characterized by hard work and poor pay, but his ability was finally recognized and he developed one of the most remunerative consultation practices in New York. He was a consulting physician to many hospitals; likewise a member of many medical societies, and was president of the New York Academy of Medicine for two terms. Doctor Loomis was twice married: to Sarah Patterson, of Hoosic Falls, New York, in 1858, by whom he had two children; to Mrs. John D. Prince, of New York, in 1887, who, with the two children, survive him. In 1886 "an unknown friend" gave to the University of the City of New York, through Doctor Loomis, the sum of $100,000 to build and equip the Loomis Laboratory. It is thought this friend is the person who afterward became Mrs. Loomis. The doctor was a liberal contributor to medical literature, conspicuous among his publications being: "Lecture Introductory to the Course of 1871–2 in the Medical Department of the University of the City of New York;" "Lessons in Physical Diagnosis," 1872, ten editions up to 1893; "Diseases of the Respiratory Organs, Heart, and Kidneys," 1875; "Peritonitis," 1875; "Lectures on Fevers," 1877; "Diseases of Old Age," 1882; "A Text-Book of Practical Medicine," 1884; also, "Climatic Treatment of Pulmonous Phthisis," "Physical Exploration of the Abdomen;" "Physical Signs of Diseased Conditions of the Liver and Spleen," and "On the Use of Opium in Acute Uremia and Convulsions."

COMPENSATION FOR QUARANTINE.

At a meeting of Detroit physicians, the following preamble and resolution, which were presented by Doctor G. H. Sherman, of that city, were unanimously adopted: *Whereas*, the spread of dangerous contagious diseases is due to those having such diseases not being strictly isolated from the public, and *whereas*, a great many people hide those having contagious diseases away from the health authorities because isolation incurs an extra expense to those isolated, in consequence of such isolation, thereby spreading disease broadcast, and *whereas*, isolating people, who have contagious diseases in their families is not intended for the benefit of those isolated, but for the protection and benefit of the public health, and *whereas*, the spread of contagious diseases can be prevented only by obtaining the hearty coöperation of the general public and the attending physicians and the health authorities in promptly reporting every case, which coöperation can only be obtained by giving to those to be isolated some inducement to have their cases reported to the health authorities by compensating them for the time they lose in consequence of such isolation, and *whereas*, it is unjust to deprive anyone from his means of existence for the benefit of the public without compensation; therefore be it *resolved*, that the physicians of Detroit, in mass-meeting assembled, request of our representatives at Lansing to pass such legislation as will allow a liberal compensation for each family that is isolated in consequence of quarantined diseases during the time of such isolation, said compensation to be derived from the public funds raised by general taxation."

DEATH OF A NOTED ALIENIST.

Doctor Jamin Strong, the well-known alienist of Cleveland, died in that city on the 29th instant, in the seventieth year of his age, the cause of his demise being organic heart disease complicated by the grippe. For years the doctor was medical superintendent of the Newburgh Asylum for the Insane, an institution located near Cleveland, during his connection with which he acquired an enviable reputation as diagnostician in diseases of the mind. He was one of the three expert witnesses for the government on the sanity of Charles Guiteau, when that assassin was on trial for the murder of President Garfield, his evidence being to the effect that the defendant was responsible for the fatal deed. In 1891 he was appointed health officer of Cleveland, and after the expiration of his term he resumed the practice of his specialty. He was an author of repute, the following being among his publications: "Education as a Factor in the Prevention of Insanity;" "The Melancholy Type and its Relations to the Different Crises of Life;" "Psychology, the Key to Medical Science;" "Physical Aids to the Study of Mind;" "The Emotions, and How to Manage Them;" "The Influence of Alcohol on the Brain and Nervous System;" and "Different Phases of Epilepsy and Hints on Their Diagnosis."

THE DETROIT BOARD OF HEALTH BILL.

The following bill providing for a board of health for Detroit is now pending action by the state legislature. It was adopted at a mass-meeting of Detroit physicians, and is calculated to remove the board beyond the pale of political influence.

Section 1.—The people of the State of Michigan enact that the board of health of the city of Detroit from and after the 1st day of February, 1895, shall consist of four members who shall be electors of the city of Detroit, and three of whom and no more, shall be graduates in medicine of at least five years' practice in the city of Detroit, and who shall be appointed by the governor by and with the advice and consent of the senate. They shall take, and file with the secretary of state, the oath of office prescribed for state officers, and their commission shall be issued by the secretary of state and be signed by the governor, the same as in the case of state officers.

On or before the 1st day of February, 1895, or as soon thereafter as may be, one member of the said board shall be appointed to hold office one year, one member to hold office for two years, one member to hold office for three years, and one member to hold office for four years, and until their successors are elected and qualified. The term of office of each member of the board after the termination of the aforesaid terms, shall be four years, and on the expiration of any term a new appointment shall be made in the same manner above prescribed. Any vacancy occurring during the term of any member shall be filled by appointment of the governor, and the member so appointed shall hold office until his successor shall be appointed in manner aforesaid.

Any or all members of this board may be removed at any time by the governor for cause.

Section 2.—Said board of health shall have and exercise within the city of Detroit all the power conferred by the laws of this state upon township boards of health, except as otherwise provided in this act. The said board shall appoint one of its own number president; and it shall appoint a secretary and a health officer who shall be a graduate in medicine of at least ten years' practice. The health officer shall receive a salary not exceeding $5,000 a year, and the salary of the secretary and other appointees and employees shall be fixed and determined by the board.

The health officer shall hold office during the pleasure of the board.

The health officer shall have authority to appoint and dismiss all subordinates and employees.

Section 3.—The preservation of the public health in the city of Detroit and the expenses of the said board of health are hereby made a charge upon said city. The common council of said city shall annually levy and collect such sum as the board of health may estimate to be necessary to defray the expenses of the board for the ensuing year, and as shall be approved by the common council and the board of estimates; and in case of an epidemic or for any other reason it becomes necessary to raise a larger sum during the year, and there is no money in the city treasury which can be lawfully devoted to such purpose, the common council shall have authority to make a temporary loan to raise such sum as it deems necessary, the amount so borrowed to be levied and collected in the next annual tax rolls. The money so raised or borrowed shall be paid into the city treasury and shall constitute a fund to be known as the "public health fund," and same shall be paid out on vouchers approved by the board of health and checks signed by the president and the secretary of the board.

Section 4.—The acts entitled "An act to provide for the establishment of a board of health for the city of Detroit," approved May 26, 1881, and "An act to provide for and confirm the board of health for the city of Detroit, and prescribe its powers and duties," approved May 25, 1893, are hereby repealed, and all the subordinate officers and appointees provided for by said acts are hereby abolished.

Section 5.—Immediately upon the appointment of the board of health provided for by this act, the present board of health shall turn over to it all the property, records and offices, hospitals and assets of every name and nature now in its possession or control.

Section 6.—The health officer shall have the power to call upon the city attorney, police department or any of the city officials to enforce the orders of the health department, whenever the regular forces of that department are inadequate."

A PROPOSED ACT TO ESTABLISH A BOARD OF REGISTRATION IN MEDICINE.

The following is the text of a bill now pending in the legislature.

The people of the State of Michigan enact:

Section 1.—The governor shall appoint nine (9) persons, residents of the state, four (4) of whom shall be regular, graduated physicians in good standing; three (3) homeopathic, graduated physicians in good standing; one (1) eclectic, graduated physician in good standing, and one physio-medical, graduated physician in good standing, all of whom shall have been actively employed in the practice of their profession for a period of at least ten (10) years, who shall constitute a Board of Registration in Medicine. Such persons shall be appointed in three (3) classes, each class to consist of three (3) persons. The first class shall be appointed and hold office for the term of three (3) years; the second for the term of two (2) years; the third for the term of one (1) year, respectively, beginning with the 1st day of July in the present year, and until their successors are appointed, and thereafter the governor shall appoint in such a manner as to maintain the representation mentioned, and before the first day of July in each year, three (3) persons qualified as aforesaid to hold office for the term of three (3) years from the first day of July next ensuing. The members of this Board may be appointed by the governor from lists of names furnished by a majority of those present at some meeting of the respective state medical societies. No member of said Board shall belong to the faculty of any medical college or university or be financially interested in the manufacture of drugs or the practice of pharmacy. Any member of said Board may be removed from office for cause, by the governor. Vacancies in said Board shall be filled in accordance with the provisions of this act for the establishment of the original Board and the person appointed to fill a vacancy shall hold office during the unexpired term of the member whose place he fills.

Section 2.—The members of said Board shall meet on the second Tuesday of July next, at such time and place as they may determine, and shall immediately proceed to organize by electing a president and secretary who shall hold their respective offices for the term of one year, and who shall have the power to administer oaths. The secretary shall give to the treasurer of the state a bond, in the penal sum of five thousand ($5,000) dollars, with sufficient sureties, to be approved by the governor, for the faithful discharge of the duties of his office. The said Board shall hold three (3) regular meetings in each year, one on the second Tuesday of March, one on the second Tuesday of July, and one on the second Tuesday of November, and such additional meetings, at such times and places, as it may determine.

Section 3.—After July 1, 1895, all persons engaged in the practice of medicine and surgery in any of its branches, and all who wish to begin the same in this state, shall apply to this Board to be registered and for a certificate of such registration. This application shall be granted to such applicants as shall give satisfactory proof of being twenty-one years of age and of good moral character, only upon compliance with some one of the following five sets of conditions.

(1) The applicant shall be registered and given a certificate of registration if the applicant shall present proof of having already legally registered under the law of 1883 as amended in 1887 entitled, "An Act to Promote Public Health." The fee for applicants of this class shall be one ($1.00) dollar.

(2) The applicant shall be registered and given a certificate of registration if he or she shall be the lawful possessor of a diploma from a medical school which has adopted requirements equal to the following, namely: a sufficient preliminary education or examination, four (4) full course of not less than six (6) months each, pursued in four (4) different calendar years and a curriculum covering anatomy, physiology, chemistry, pathology, materia medica, therapeutics, histology, hygiene, practices of medicine, surgery, obstetrics, gynecology, diseases of the eye and ear, bacteriology and medical jurisprudence. No

foreign diploma which does not give the holder the right to practice in the country in which it was issued shall entitle the holder to practice in this state without examination. The fee for registration from applicants of this class shall be five ($5.00) dollars.

(3) The applicant shall be registered and given a certificate of registration if he or she shall satisfactorily pass an examination before the Board upon subjects enumerated above, said examination to be conducted as follows:

a. The applicant shall pay a fee of twenty-five ($25) dollars prior to the examination.

b. The examination shall be in writing.

c. The questions in all subjects, except materia medica and therapeutics, shall be such as may be answered in common by all schools of medicine.

d. The applicant shall be examined in the two subjects mentioned in the previous paragraph, by those members of the Board belonging to the same school as the applicant, so far as possible, and no applicant shall be rejected because of his adherence to any particular system of medicine.

e. An average percentage of at least seventy-five (75%) shall be required from every candidate. No additional fee shall be charged for the registration of those who successfully pass such an examination.

(4) The applicant shall be registered and given a certificate of registration if he or she shall present a certified copy of a certificate of registration or license which has been issued to said applicant in another state or country where the requirements for registration shall be found equivalent to those of this act, and, provided said state or country shall extend a similar reciprocal courtesy to those holding certificates in this state who may immigrate thereto. The fee for registration from applicants of this class shall be five ($5.00) dollars.

(5) The applicant shall be registered and given a certificate of registration if the applicant be a woman who desires to practice midwifery alone, provided the Board shall determine, by suitable examination, that she possesses the requisite skill and intelligence therefor, and provided the certificate issued to her shall expressly authorize her to practice midwifery alone. In issuing certificates to midwives the Board shall inform them concerning the use of proper antiseptic measures for the work, and shall require of them that they report to a physician all cases of puerperal fever and of ophthalmia neonatorum occurring in their practice. The certificate provided for in this section shall in each case specify the ground upon which it is issued; that is, whether by reason of existing laws, registration, diploma, successful examination, registration in another state or to a midwife. The fee for registration of this class shall be five ($5.00) dollars.

Section 4.—Any applicant refused a certificate by said Board may appeal from the decision of said Board to the appointing power thereof, who may thereupon appoint a medical committee of review, consisting of five (5) members, two (2) from the regular school and one from each of the other schools of practice, who shall be selected from the names furnished the governor by said state medical societies; said committee of review shall investigate the appeal of the said applicant and determine whether a certificate should issue and their decision shall be final. If said committee by unanimous vote reverse the determination of the Board, the Board shall thereupon issue a certificate to the applicant. The expense of said appeal shall be borne by the applicant.

Section 5.—The person receiving a certificate of registration shall file the same, or a certified copy thereof, with the county clerk in and for the county where he or she resides, and said county clerk shall file said certificate, or a copy thereof, and enter a proper memorandum thereof in a book to be provided and kept for that purpose. And said county clerk shall each year furnish to the secretary of said board a list of all certificates filed in his office during the preceding year and upon notice to him of the change of location or death of a person granted a certificate, or upon the revocation of the certificate granted to such person, said county clerk shall enter at the appropriate places in the record so kept by him, a memorandum of said fact; so that the records so kept by said county clerk shall correspond with the records of said Board so kept by the secretary thereof. In case a person having thus filed a certificate shall move into another county or state, he or she shall procure from said county clerk a certified copy of said certificate and file the same with the county clerk of the county to which he or she shall so remove. Said county clerk shall file and enter the same with like effect, as if the same was the original certificate.

Section 6.—The Board of Medical Examiners may, by a unanimous vote, refuse to grant or may revoke a license for the following causes, to-wit: chronic and persistent inebriety, the practice of criminal abortion, conviction of crime involving moral turpitude, or for publicly advertising special ability to treat or cure diseases which, in the opinion of said Board, it is impossible to cure; in complaints for violating the provisions of this section the accused person shall be furnished with a copy of the complaint and given a hearing before said Board in person or by attorney.

Section 7.—The compensation, incidental and traveling expenses of the Board shall be paid from the treasury of the state. The compensation of members of the Board shall be five ($5.00) dollars each for every day actually spent in the discharge of their duties, and such additional compensation in the case of the secretary, as the Board may deem proper, and three cents (3¢) per mile each way for necessary traveling expenses in attending the meetings of the Board, but in no case shall any more be paid than was actually expended. Such compensation and the incidental and traveling expenses shall be approved by the Board and sent to the auditor of the state who shall certify to the governor the amounts due as in case of other bills and accounts approved by him under the provision of law; *provided*, that the amounts so paid shall not exceed the amount received by the treasurer of the state from the Board in fees, as herein specified, and so much of said receipts as may be necessary is hereby appropriated for the compensation and expenses of the board as aforesaid.

Section 8.—The Board shall keep a record of the names of all persons registered hereunder and shall endeavor to collect from the various county clerks of the state all registrations made under the laws of 1883, in order that the record of registered physicians may be as complete as possible. The Board shall also keep a record of all moneys received and disbursed by said board and said records and duplicates thereof shall always be open to inspection in the office of the secretary of state. Said Board shall annually report to the governor, on or before the 1st day of January in each year, the condition of medicine or surgery in this state, which report shall contain a full and complete record of all its official acts during the year, and shall also contain a statement of the receipts and disbursements of the Board.

Section 9.—Any person who shall practice medicine or surgery in this state contrary to the provision of this act, shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than fifty nor more than one hundred dollars, or by imprisonment in the county jail for a period of not less than ten or more than ninety days, or both fine and imprisonment, for each offense. It shall be the duty of the respective prosecuting attorneys of the counties of this state to prosecute violations of the provision of this act upon information furnished by the records of the county clerk, or a member or members of said Examining Board, or by any other person entitled to credit.

Section 10.—This act shall not apply to the commissioned surgeons of the United States Army, Navy or Marine Hospital service, in actual performance of their official duties, or to regularly licensed physicians or surgeons from out of the state, in actual consultation with physicians of the state, nor to interns studying in regularly incorporated hospitals, to dentists in the legitimate practice of their profession, or to temporary assistance in cases of emergency, or to the domestic administration of family remedies.

Section 11.—Any person shall be regarded as practicing medicine or surgery within the meaning of this act, who shall append the letters M. D. or M. B. to his or her name, or prefix the title "Dr." in a medical sense, to his or her name, or who shall prescribe for the use of any person or persons any drug or medicine, appliance, or other agency for the treatment, cure or relief of any physical or bodily malady, defect, deformity, injury, infirmity, or disease, either inherited or acquired, or who shall advertise to do so.

Section 12.—An act entitled "An Act to promote the public health," approved June 6, 1883, is hereby repealed.

MINOR INTELLIGENCE.

THE interior of the womb has been photographed by a Swiss physician.

A CONSIDERABLE amount of important matter has necessarily been omitted from this issue.

DOCTOR BEHRING the discoverer of antitoxine is to receive the Cross of the Legion of Honor.

THE CHICAGO COLLEGE OF PHYSICIANS AND SURGEONS is about to be absorbed by the University of Illinois.

DOCTOR BURTON SANDERSON succeeds Sir Henry Acland as professor of physic in the University of Oxford.

THE traveling physician is required to pay a license of $25.00 a day for permission to practice at Muscatine, Iowa.

CHICAGO has 3,400 physicians. With a population of 1,625,000 inhabitants, there is about one physician to 478 persons.

MEDICAL students in France are partially exempt from military service. This freedom has caused a large increase in attendance at the French colleges.

DOCTOR D'ARSONVAL is the successor to Professor Brown-Sequard in the Chair of Medicine in the College de France.

THE CHARCOT MONUMENT.—About $5,000 have been contributed for the erection of a monument to the great neurologist.

THE College of Physicians of Philadelphia has elected Doctor J. M. DaCosta, president, and Doctor John Ashhurst, vice-president.

THE announcement that Doctor William Osler, of John Hopkins University, is to be president of the McGill University, is not true.

A SIGN OF THE TIMES.—An enterprising Saint Louis firm advertises splints under the headline, "To surgeons and football players."

THE bacteriological department of the New York City Health Department has been given six new assistants at salaries of $2,000 each.

THE health department of Brooklyn has an expert in contagious diseases, Doctor Joseph T. Duryea having been appointed to the position.

IT is probable that the Third International Dermatological Congress will be postponed until 1897. In any event it will not take place this year as proposed.

ALVAH H. DOTY, M. D., has been appointed health officer of the post of New York. The members of the medical profession unanimously endorse this appointment.

THE Pennsylvania State Board of Public Charities has asked that $300,000 be appropriated for the establishment of a colony of epileptics in that commonwealth.

IN a report of three cases of diabetes reported by Doctor P. W. Williams, of Bristol, England, treated with extract of pancreas, the remedy is said to accomplish nothing.

THE new building of the Lying-in Hospital of the City of New York was opened on the 16th instant. It is located on the corner of Second avenue and East Seventeenth street.

DOCTOR WILLIAM DETMOLD, one of the oldest and most distinguished surgeons in the United States, died in New York, December 27. He introduced orthopedic surgery into America.

THE Pennsylvania State Board of Medical Examiners will convene in Philadelphia, on February 14, 1895, to examine applicants for license to practice medicine in that commonwealth.

THE practice of spitting in the streets or on the floors of public buildings is being prohibited in Australia. The city of Sidney has imposed a fine of one pound sterling on any person convicted of the offense.

DOCTOR GEORGE W. TOPPING died at DeWitt, on the 15th instant, aged sixty-seven years. The doctor graduated from the medical department of the University of Michigan in 1854, and for years has been one of the prominent physicians of the state. On several occasions he had been honored by the Michigan State Medical Society, and was elected to the presidency in 1882.

The bureau of medicine and surgery of the navy department has ordered an investigation of the diphtheria antitoxine treatment. Past Assistant Surgeon Cordeiro has been detailed to study the subject.

Doctor Herman Weber, a London practitioner, has given the Royal College of Physicians $12,500 to form the basis of a prize to be awarded every two or three years for the best essay on the subject of tuberculosis.

At a recent conference of the presidents of Indiana colleges, held at Indianapolis, it was decided to prohibit intercollegiate football contests between students of institutions within the pale of their executive administration.

The New York Academy of Medicine.—The Academy is a flourishing body. It has half a million of assets, 774 resident fellows, a self-sustaining bureau of nurses, and the library has been augmented by many additions.

The firm of Parke, Davis & Company, manufacturers of pharmaceutical products, has been re-incorporated with a capital stock of $2,000,000, with $1,200,000 paid in. The life of this successful corporation is extended thirty years.

The committee of arrangements for the meeting of the American Medical Association have already commenced work. It consists of Doctor William Osler, chairman; Doctor T. A. Ashby, treasurer; and Doctor George E. H. Rohé, secretary.

Bacteria in Railway Cars.—Investigation of the air of English railroad cars shows 16,000 microbes to the cubic inch in first-class carriages; 34,000 in second-class; 78,000 in third-class. The railroads, it is thought, may have prompted these figures.

Oscar Oldberg, Ph. D., dean of the Illinois College of Pharmacy, and professor of pharmacy in that institution, has been engaged to edit *The Bulletin of Pharmacy*, the duties of the position being assumed with the January number of that excellent journal.

The New York Ophthalmological Society has elected the following officers for the ensuing year: President, Doctor F. N. Lewis; vice-president, Doctor H. D. Noyes; secretary, Doctor F. D. Skeel; committee on admissions, Doctors Mathewson, Dennett, and Roosa.

Doctor Bertellow, the inventor of the anthropometrical system, has discovered a new process for identifying handwriting. It is based on the measurement of the pulse-beatings, which are said to have in everybody a different characteristic effect upon the handwriting.

The New York Academy of Medicine has elected the following executive officers: President, Doctor Joseph D. Bryant; vice-president, Doctor William M. Polk; recording secretary, Doctor Reginald H. Sayre; corresponding secretary, Doctor M. Allen Starr; treasurer, Doctor O. B. Douglas.

The Association of American Anatomists held its seventh annual meeting in the medical department of Columbia College, New York City, December 28 and 29, 1894, the president, Professor Thomas Dwight, of the Harvard Medical School, presiding. Eleven papers were read and discussed. Eleven applicants were initiated, making the present membership 114.

THE recent annual election of officers of the Saint Louis Academy of Medicine resulted in the following choice: President, Doctor Frank D. Mooney; vice-president, Doctor Frank R. Fry; secretary, Doctor G. E. Alvord; corresponding secretary, Doctor C. M. Nicholson; treasurer, Doctor J. B. S. Alleyne.

THE American Physiological Society recently convened in Baltimore. The management of the affairs of this society is entrusted to an executive committee embracing six members. The meeting was a profitable one, a large number of papers having been read and discussed. Several applicants were elected to membership.

THE Vanderbilt family have enriched the medical school of Columbia College—the College of Physicians and Surgeons—by another benefaction of more than half a million dollars. This munificent donation will be expended in enlarging the anatomical department, the Vanderbilt Clinic, and the Sloane Maternity Hospital.

DOCTOR NOYES, formerly of Detroit, but now of Providence, Rhode Island, has presented Oak Grove, the private hospital for the treatment of nervous diseases, with $5,000 worth of stock in the institution to be devoted to building an entertainment hall, the only condition of the gift being that the new structure bear the name of "Noyes Hall."

THE laboratory of bacteriology of the Philadelphia Polyclinic has decided to make microscopic examinations of diphtheritic membrane gratuitously and report to physicians the bacteriological diagnosis. Sterilized swabs and blood serum tubes, together with instructions for procedure, furnished on application. The result of examination will be made known within twenty-four hours after return of tube.

JAMES CORBETT, the prize fighter, was recently invited to lecture on physical culture to the students of the medical department of Vanderbilt University. The presumption of the pugilist has its counterpart in the lay individual who attempts to write upon sanitary and medical topics, but the action of the college authorities in extending this invitation is so shamefully rediculous as to be without a parallel.

THE Calhoun County Medical Society held its annual meeting at Battle Creek on January 29. Doctor Theodore A. McGraw, of Detroit, read a paper on "The Treatment of Tuberculosis of the Knee-Joint," and Doctor A. E. Bulson, of Jackson, discoursed on "The Treatment of Corneal Ulcer by the General Practitioner." The meeting was largely attended, and much interest was manifested in the deliberations. The president, Doctor Eugene Miller, of Battle Creek, delivered an address.

ON the night of December 25 the Merz Capsule Company of Detroit sustained great loss by fire, the department where hard empty capsules were manufactured being the most seriously damaged. The work of rebuilding will be commenced immediately but it will be several months before they are able to properly serve customers with their various specialties. In the meantime they are prepared to dispense filled capsules and empty elastic capsules for fluids, the departments for the manufacture of which were comparatively uninjured.

The Quarter Century Club is the title of an organization recently established in Detroit. The objects of the society are of a purely social, historical, and biographical nature. Membership is limited to physicians who have been practicing in Detroit twenty-five years. There are about twenty eligible practitioners in the profession of the city.

The Cleveland Medical Library Association was organized on November 27 last, by about thirty of the representative physicians in that city, and the administration of affairs was delegated to the following officers: President, Doctor J. E. Cook; secretary, Doctor P. Max Foshay; treasurer, Doctor O. F. Gordon; librarian, Doctor C. A. Hamann; trustees, Doctors D. P. Allen, H. K. Cushing, H. J. Lee, I. N. Himes, W. W. Holliday, H. E. Handerson, W. A. Knowlton, M. Rosenwasser, O. B. Campbell.

With the idea of determining the existence of tuberculosis 20,310 cattle were subjected to the hypodermic administration of tuberculin during the past year by the New York State Board of Health. A diagnosis of the disease was made in 687 of the animals and their destruction was summarily ordained. The average dose for an injection comprised one-fourth of a cubic centimeter of the lymph, and no liquid or solid food was given the animal for eighteen hours thereafter. A rise of two degrees Fahrenheit is regarded with suspicion, and a higher temperature almost invariably betokens consumption. Butter made from the milk of tuberculous cattle did not contain bacilli, but this evidence was considered unreliable, the presence of bacilli in butter having been demonstrated by examinations of this article purchased at random.

The Cleveland Medical Society has 291 members and the average attendance at its meetings during the past year has been 135. This is an excellent showing for a local society and augurs well for the fellowship of the Forest City profession. At the annual meeting held on the 11th instant, the following were elected officers for the ensuing year: President, Doctor William E. Wirt; vice-presidents, Doctor A. F. House and Doctor Henry S. Upson; recording secretary, Doctor W. F. Brokaw; corresponding secretary, Doctor Frank S. Clark; treasurer, Doctor N. Stone Scott; librarian, Doctor William E. Bruner; censors, Doctor M. Rosenwasser, Doctor Howard S. Straight, Doctor L. B. Tuckerman, Doctor A. J. Cook, and Doctor W. J. Scott; pathologist, Doctor A. P. Ohlmacher; trustees, Doctor H. G. Sherman, Doctor C. Gentsch, and Doctor C. F. Dutton.

CONTEMPORARY OPINION.

THE TROUBLE WITH THE DETROIT HEALTH DEPARTMENT.

[THE NEW YORK MEDICAL JOURNAL.]

In Detroit there is trouble between the mayor and the health department, and it dates from last summer, when the board of health dismissed its health officer. The board of health consists of three physicians and three *ex-officio* members, who are the mayor, the city controller, and the president of the Police Commission. One of the physicians, Doctor Duncan McLeod, was the health officer. He was dismissed after there had been some excitement in the city over a case of small-pox which had occurred in a cheap hotel and had not been discovered until the patient had died and several persons had been exposed to the disease. There has since been a number of cases in the city. There was no small-pox hospital, but the board of health built one as quickly as possible. The deposed health officer asked the courts to reinstate him, and got a decision that he could be employed as health officer when there was no epidemic of small-pox, but could not hold the office so long as the board of health found small-pox in the city. It was a singular finding. The mayor thought the health officer should be reinstated, but could not get a sufficient number of votes for the purpose. The deposed officer drew his salary by the consent of the mayor and city controller, notwithstanding his dismissal. For weeks there has been a steady turmoil of city politics interfering with the work of the board, and small-pox continues in the city. The common council has voted to dismiss the medical members of the board of health, who are Doctor Edward W. Jenks, the well-known professor of gynecology, Doctor N. W. Weber, and Doctor Joseph Schulte, but an injunction has issued from the circuit court restraining the council from interfering. The medical members of the board all stand high among the physicians of the city and state, and perform their duties without pay. The health officer has a salary of $5,000 a year. The city controller has refused to pay any bills contracted by the present health officer, and refuses him his salary.

The mayor has served three terms consecutively, and is thought to be ambitious of reëlection. It is to be hoped that he is not so willing as he appears to jeopardize the health of the city to advance his side of the case. Doctor Schulte has resigned in disgust. The other members, Doctor Jenks and Doctor Weber, propose to stand to their posts and remain true to their work, maintaining the health department up to its full degree of usefulness until their terms of office expire. Popular feeling is with them and against the mayor.

The law under which the board operates is not satisfactory to the people of the city generally for many reasons, principal among which is the fact that on the board of health there are three *ex-officio* members, two of whom are appointees of the mayor's and thus are thought to be subservient to his will and under his control. The board being composed of six members, with three of them bound together politically as one man and having the privilege of choosing three other members, it is reasonable to suppose that these three appointees will be such as the mayor and his two colleagues deem pliable. The three appointed members must be medical men, but need not necessarily be representative physicians.

This method of choosing the members of the board of health is not such as gives to the medical profession a chance to be recognized, and it is one that might convert this important board into a formidable political machine. The profession has absolutely no voice in securing appointments of representative men. When the trouble is simmered down to its dregs, it is thought to be due to nothing more nor less than the mayor's finding he can not dictate to three members of the board of health and to his desire to get rid of these men and fill their places with men who are willing to yield to his influence.

MEDICAL SCHOOLS AND LARGE CITIES.

[THE DETROIT FREE PRESS.]

A MOVEMENT on foot in Illinois recalls very forcibly the proposition heretofore made in our own state to transfer the clinical department at least of the medical school at the University to Detroit. The Illinois State University is located at Champaign and has always been, in a general way, a flourishing institution. It has long been felt, however, by the friends of the university that so far as the medical school was concerned the facilities offered were not as satisfactory as those which could be had in a larger town and notably in a city like Chicago. Steps were taken two years ago for the annexation to the university of the College of Physicians and Surgeons, located in Chicago; but the negotiations fell through owing to inability to agree upon the price to be paid. Recently they have been renewed and a bill is to be introduced in the Illinois legislature authorizing the purchase for the university of the college referred to and appropriating the necessary amount. The intention is to annex the college to the university under the style of the medical department of the University of Illinois at Champaign; and the belief is that because of the immense amount of clinical material attainable in Chicago the benefits derived from a medical course will be greatly increased. Necessarily in Champaign this material has been very limited owing to the smallness of the town; but with the immense field of Chicago to draw from the facilities of the department will be unexcelled by those of any medical school in the country.

A substantially similar movement is on foot in California, the purpose being to procure the necessary legislation and appropriation for the erection in San Francisco of a central building for the several medical colleges of the state university. The underlying motive as in Illinois is the procurement of the clinical facilities which are now lacking; and the project seems to have the hearty approval of faculty and students.

In the existing condition of affairs at the medical schools in our own University it would not be a bad idea to revive the project of establishing the clinical department at Detroit. There are precisely the same reasons for so doing as those which are found sufficient in Illinois and California. Detroit necessarily furnishes abundance of clinical material while Ann Arbor is just as necessarily lacking therein. If there is nothing in the way but hide-bound conservatism—and it is our recollection that this was what killed the project when first broached—it ought to be feasible to make the change. It would be a damper perhaps on the existing medical schools in Detroit but their loss would be the great gain of the University.

RECENT PUBLICATIONS.

REVIEWS.

THE PRINCIPLES OF SURGERY AND SURGICAL PATHOLOGY.*

This work is not originally a home product, but it has been selected by a number of surgical authorities as a manual of surgery combining the desirable quota of practical and theoretical information, and has therefore been translated for the use of the contemporary surgical student and practitioner.

It is divided into three sections: the first dealing with the general principles governing surgical operations; the second treating of the method of applying surgical dressings, and the third section discussing surgical pathology and therapy. The text is amply elucidated by nearly 500 illustrations.

It is unnecessary to observe that this arrangement is at once logical and consistent. That portion of the work dealing with surgical therapy is very comprehensive, and the surgeon is concisely informed of the immunizing methods now so commonly in vogue. The treatment advocated is at all times rational and modern.

The volume is a very handsome one, and will prove one of the most useful and popular manuals of surgery now in use.

*By Doctor Hermann Tillmanns, Professor in the University of Leipsic. Translated from the German by John Rogers, M. D., New York, and Benjamin Tilton, M. D., New York. Edited by Lewis A. Stimson, M. D., Professor of Surgery in the University of the City of New York. 441 Illustrations. D. Appleton & Company, New York.

MEDICAL PROGRESS.

MEDICINE.

MEDICAL TEACHING IN THE UNIVERSITY.

The following extracts from an address recently delivered by DOCTOR OBETZ before the Board of Regents of the University of Michigan are given the readers of The Physician and Surgeon, on account of the interest some will find therein:

THE HOMEOPATHIC COLLEGE.

When the legislature voted to establish the two chairs asked for in 1875 they innocently thought that that was all it would cost. This cost of $6,000.00 per year was granted through a deep sense of justice, as the teaching of the department of medicine and surgery only represented a part of what people thought to be right in medicine. Leaving them in undisturbed possession practically gave them the recognition of the state, and also state aid in teaching their dogmas, and shut out the opposition entirely. This is a free country and in a state institution of the nature of the University there ought to be no state medicine, as there is no state religion. This is what has so persistently secured legislation in favor of homeopathy. If medicine must be taught in the University no one sect should monopolize it.

The professors of the department of medicine and surgery as a whole were hostile, and although at first they allowed the homeopaths to listen to their lectures and examined them they subsequently asked to be relieved of this duty; examiners were appointed and again dispensed with and students of the homeopathic school were simply allowed seats in their amphitheatre but were otherwise ignored. This caused the homeopathic profession to go to the legislature for more professorships which were readily granted. Thus a chair of Surgery and later a chair of Gynecology were added. When, finally, a hospital was built it was called the University hospital and the patients and professors of both schools were admitted to its wards.

So far the Homeopathic college had only four professorships. An arrangement had been made by which an ophthalmological clinic had been built up and now we had to have a professor to take care of it. Governor Luce been doing a little figuring for himself and at first absolutely refused to entertain the idea of adding any new chairs to the Homeopathic College. After much urging he gave his consent, first requiring a personal pledge of me, as dean, that as long as I remained a member of the faculty I would use my personal influence against adding any new chairs. This being his ultimatum I gave the pledge, knowing when I did so it would make trouble for me; a dean who opposed establishing new chairs on the ground of expense, could not avoid suspicion of being a traitor to the cause. This was my first great offence, and was used secretly by my enemies to work up a feeling against me. Homeopathic aspirants desired to establish chairs of nervous diseases, diseases of children, and any others the legislature could be worked for. This I opposed and my downfall in consequence was ordered.

Now, let us see what has been accomplished in the twenty years the college has been on the campus. We have graduated 309 students up to date. We have received from the state for running expenses of the hospital and college $204,213.45, and have paid back in fees $49,430.62. This gives us a net loss of $154,962.45. Dividing by 309 gives a net loss of $500.00 on every student graduated. Besides this we have had the use of the money in the hospital plant interest of which is not counted. I wish to explain here that there may be a little variation from these figures. The amount drawn from the treasury is exact but the students fees, owing to the way books were kept before the present treasurer was appointed, made it difficult to get the amounts paid in to the cent. I have taken the estimate of the treasurer, of the amount, with the assurance that the actual amount paid in is less than the sum above stated.

THE HOSPITALS.

I wish to call attention to the fact that the first hospital was called the University hospital, and when the Homeopathic hospital was built it was left in the hands of the faculty of the department of medicine and surgery. During the clinical controversy of a few years ago it was asserted that most of the clinic was a personal one and would leave when prominent professors withdrew. Those who kept tab on patients of the next year to disprove this personal nature of the clinic, asserted that eighty per cent. of the clinical patients came without any direction other than a general desire to enter the hospitals at the University. When these people are asked by the hackmen where they desire to go, they say to the hospital at the University, and are taken to the University hospital. The Homeopathic hospital, with its distinctive name, is not "in it." For this reason the University hospital is more than full; we only get those especially sent to us, which is only a small per cent. of those coming to Ann Arbor, and in consequence run about half full on the average. The overflow from the University hospital is sent home, and although the state has furnished ample hospital room for all the clinic coming to Ann Arbor, the "pathy" fight does not allow of its use by citizens of the state who need treatment. This "dog in the manger" act has been allowed in spite of protests on our part, the Regents fearing to act over the objection of the clinical professors of the department of medicine and surgery.

LOSSES INCIDENT TO THE FIGHT IN THE HOSPITAL MANAGEMENT.

At the time it was proposed to vacate the old hospitals I was waited on by a committee coming from the department of medicine and surgery with a memorial asking for "a hospital" for the University. I was asked if this met my approval and when I said it did I was requested to sign the memorial, and I complied. The Regents asked for the money with this understanding, the City of Ann Arbor voted $25,000 with this understanding, the legislature gave $50,000 more with the same understanding.

At this time deaths and expiration of office made a great change in the make-up of the Board of Regents, and the new members listening to the larger faculty did what they would not have done after some experience in office. They appointed a committee to visit eastern hospitals, consisting of three Regents and three members of the department of medicine and surgery, who returned with plans for two hospitals in place of the one contemplated in the memorial. To this, as dean of our faculty, I objected, but the story of the old fight had done its work with the new Regents and my protest was in vain. The sum of money voted at this time, and what was added, was sufficient to have reproduced Grace hospital on the campus, a hospital capable of holding twice the number of beds now existing in the two hospitals at Ann Arbor. This number of beds would have been sufficient for the needs of the University clinic for the next fifty years. I further urged that two hospitals meant double expense to the state in running expenses, and this for all time. The fear of trouble between the factions was too great, and the plans for two hospitals were adopted by the Board. The immediate loss to the state was great and consisted of the following items:

One hospital like Grace could have been placed on the campus, thus saving the purchase of new grounds.

Such a hospital could have been heated from the common heating plant, thus saving an extra plant, and its running expenses. The future electric plant would light it with but little additional cost. The cost of taking care of the grounds, and janitor's work could have been reduced by using the campus force, resulting in a great saving to the state.

For one hospital but one amphitheatre would have been required.

I urged all these considerations but was overruled. The immediate extra expense was—

Purchase of grounds	$8,500.00
Extra amphitheatre	5,000.00
Changes necessary in amphitheatre	4,000.00
Making in all	$17,500.00

nine thousand dollars of which was a dead loss.

No provision was made in either hospital for the accommodation of the superintendent and his family. The University hospital being overcrowded he could not be allowed any of its space. Some of our unoccupied rooms could have been utilized but it would never do to have the superintendent of the University hospital live in an irregular institution, and in consequence the state pays $300.00 per year for a house to be used by the superintendent, and pays all his household expenses. As there is no check on these, this is one of the genuine soft-snaps in the public service of the state. With the extra heating plant, extra kitchen and force of employees, it it easy to see that the state is a great loser by the present arrangement.

While ample space exists at present to handle all clinic coming to Ann Arbor if the hospitals were combined in their management, the state is being importuned for more hospital room. The Regents under the circumstances so far have refused to support the demand. The faculty of medicine and surgery have now enlisted the State Board of Health to ask for a hospital for consumptives to be located at Ann Arbor, and placed in their charge. Just look this request over for a few minutes and see if in the light of common sense there is a great demand and future for it. The treatment of the first stages of tuberculosis is climatic, rather than medicinal, medicines are of value, but dry atmosphere, sea air or altitude, will do more than all else to restore health. When the disease progresses to the hospital period, crowding such patients into wards cannot but be harmful to them, as the disease is infectious, and all agree that isolation and not aggregation, is the type of treating such affections. When it is proven that such a congress of consumptives works harm to more than can be relieved by the most skillful treatment, the state will be asked to furnish cottages for isolation, and the hospital now asked for will be used for the present surplus clinic. "Dost smell a mouse, Horatio?" With my experience for the last twelve years in observing the trend of this department, I see only a chance to add a further force of employees to that already over-stocked department of medicine and surgery, and a beautiful chance for the state to spend vast sums of money with very little benefit.

THE DEPARTMENT OF MEDICINE AND SURGERY.

From the establishment of the medical department of the University to the present time, it has kept behind the skirts of that antiquated old dame, the American Medical Association, and plead the restrictive clause of its code of ethics, as a reason why the laws of the state, and the will of the people of the state, as expressed by its legislature should be defied. In one of my first talks with the Regents, I learned that the Board was influenced by the argument that the medical department, being a great success in a financial way, the Board did not think it wise to disturb it by introducing homeopathy. They feared to antagonize the so-called regular profession and thus cause loss of prestige and consequent falling off of students, and in this way financial loss to the state. The school might have been a financial success at some period of its history but not within my time in the University. In starting out with this account of this department it is well to consider that the object of the medical college is to educate medical students, not to furnish sinecures for those who belong to its faculty, and have their names on its pay rolls. In 1875 this department had eleven men on its pay-roll, and they drew as salary $16,041.66. In 1894, the last year, after twenty years of fight on the campus, we find its pay-roll contains fifty-nine names and the pay-roll is swelled from $16,041.00 to $48,644.00 while the students' list is almost the same—373 then and 382 now. Thus while the number of employees has increased to almost 400 per cent., and its expense account 300 per cent., its list of students has increased just twelve. During the intervening time the pay-roll of the department of medicine and surgery has cost the state $515,906.16. They have paid into the treasury of the state for the same time, counting the entire receipts and disbursements, on account of the department $236.732.45, making a net loss for the period covered $275,275.71 on this department as a department. Now, on account of the fact that they refused to obey the law of the state and forced the state to introduce homeopathy as a separate school they caused the loss to the state in the way of doing business of the further sum of $154,982.45, making the whole net loss on twenty years $429,158.16. This makes their loss on their own account $169.57 for each student graduated by them, and on their whole account with the state chargeable to the existing state of things $263.89 for each student graduated. I know the gentlemen belonging to the faculty of the department of medicine and surgery will oppose this view, but this is business and not sentiment and I am sure those who make up the accounts of the state will take this view. Taking the salary list and the expense account to-day, that for the Homeopathic college is $14,200.00 and that for the department of medicine and surgery is $48,644.00, making in all $62,844.00, thus in the next twenty years at the same rate the professors and employees will draw $1,256,880.00, and pay into the treasury, if the earnings remain the same as they have for the past twenty years for both colleges $286,162.07, making a net loss to the state for the next twenty years $970,718.07. Granting that both colleges will graduate the same number of students that they have in the last twenty years, 309 for the homeopathic and 1630 for the department of medicine and surgery, the net loss on each student will be just $505.75.

When, therefore, the present Board of Regents came into office and boldly proclaimed their intention to manage the affairs of the University for the best interests of the people irrespective of the "pathy" quarrel, I hailed the event with great joy. Never in the history of my connection with the University could it be said we had a fairer, or more broad-minded set of men to deal with. Even the much-abused "old school" doctor of the Board of Regents boldly affirmed that every student in the medical department should be taught homeopathy, and made to pass rigid examinations on all of our courses before being allowed to graduate. Many of the Board employ homeopaths, and the rest of the Board are a unit in insisting that we should be accorded the same rights as the other departments, but *nothing more.* All they asked was to drop the distinctive name, as this would free them from embarrassment, and this was only to be done on the official register of the University. We could be catalogued and could talk and teach what we pleased. I drew up the faculty rules by which this could be done and read them to the Board at their request. Subsequent events are matters of history. In denying the right of the American Institute of Homeopathy to control any member of the faculty in the University it also set aside the controlling power of the code of ethics of the American Medical Association, and now should be ready to join with the legislature in doing justice to the tax-payers of the state and forever bury the "pathy" question as far as Michigan and its University are concerned. Everything is ripe for it and justice to all demands it. If amalgamation is ordered all "pathies" which can pay a reasonable amount in return should be admitted to the medical department. The eclectics should have a chair of Materia Medica, if in the wisdom of the legislature it is thought best. The laws of the American Medical Asssociation are very elastic on occasions, and when the question of its members being allowed to sit on Boards of Health with irregulars came up before its judiciary council, that tribunal decided they might, and ought to do so, to conform to the laws of the various states. I think they called it conforming to "governmental policy." If amalgamation should be ordered and either party to the consolidation should refuse to enter into such an arrangement, the other "pathies" should be allowed to take the medical department. I wish here to explode the claim that the fact that the department of medicine and surgery teaches homeopaths, dents, and lits, increases the expense of the department. The greatest expense caused this department by students of other departments is in the laboratories, and occurs in the way of room and appliances to work with. The loss on this department, while it could be reduced by doing away with needless laboratories, *is not here;* it is in the great number of its professors, assistant professors, instructors and assistants, and their salaries, which in many instances are not large but in others are very excessive for the work done. Most of their work is done by lectures and it makes no difference how large an audience a man who lectures has, or how many departments they come from. I wish to state here that the cost of fuel and lights and interest on plant is not reckoned in the estimates made, as to the cost of education of each student in my previous estimates. This will make the cost very much greater and should be reckoned in making exact estimates. In my proposed amalgamated faculty I save more each year than the students pay into the treasury, and if, as they say students would not come to us, we would still be on the safe side financially.

PLAN FOR AMALGAMATION.

I believe the medical department should be reorganized in the interest of a more thorough medical education, in the interest of justice to all students, and in the interest of economy. In doing this I would allow each school a professor of Materia Medica, and of the Theory and Practice of Medicine. I would divide the operative chairs equally between them thus saving repetition. Thus Surgery and Obstetrics should go to one school and Gynecology and Ophthalmology to the other. This is economical and perfectly fair. The rest of the chairs should be single and some of the useless chairs existing in the medical department should be entirely abolished. The faculty list would be as follows:

Materia Medica and Electricity.	Materia Medica and Electricity.
Theory and Practice and Nervous Diseases.	Theory and Practice and Skin Diseases.

Surgery and Clinical Surgery.
Obstetrics and Diseases of Children.
Gynecology and Diseases of Women.
Ophthalmology and Otology.
Pathology and Gross Pathology and Post-Mortem Examination.
General Chemistry.
Hygiene and Bacteriology.
Anatomy and Histology.
Physiology and Embryology.

The salary list for this faculty should be $28,500. This allows $2,000.00 salary for the practice chairs, $2,500.00 for the laboratory men. There should be added eight assistants to the practice chairs who are also to carry on the demonstration courses at $200.00 each. Making this item $1,600.00. The laboratory men should each have one assistant at $600.00, $2,400.00 in all for this item. Each of the same chairs a sub at $200.00, making this item $800.00. For the anatomical laboratory a demonstrator and lecturer at $1,200.00 and three sub demonstrators at $200.00 each, making this item $1,800.00. Adding the items we have a salary list of—

Professors, ...	$ 28,500.00
Practical Chairs, ...	1,600.00
Laboratory Assistants, ...	3,200.00
Anatomical Laboratory, ...	1,800.00
	$ 35,100.00

The regulars say they would agree to this if the name homeopathic was left out. The homeopaths say it could be done if the name homeopath was used; that the man who proposes to drop the name, as I did, is a traitor to the cause of homeopathy, a Benedict Arnold, a Judas Iscariot, and worthy of professional ostracism. In other words the fight is not one on principle, but over a name only.

By closing your eyes you can easily imagine this is not Michigan, a sovereign state, but the land of Leilliput and the question the great one of the little Indians and the big Indians, or the other great question of the high heels and the low heels which caused so much trouble for that diminutive empire. Verily, Dean Swift understood human nature when he wrote his great satire.

It has been estimated that I am from ten to one hundred years ahead of my time in advocating this amalgamation which has sound business principles and common sense back of it. This is not true: the press and public are both ready for it and were it put to a vote of the people it would carry by a large majority. The Regents and public should know that the parent of the American Medical Association, the old New York State Society, voted in 1882 to do away with the restrictive clause of the code of ethics and to recognize and fraternize with all reputable medical men recognized by the laws of the state, and although their delegates were excluded from the meetings of the American Medical

Association they have remained steadfast to the present time. *I am not alone.*

They say that oil and water will not mix. We do know that by adding a little mucilage oil and water will mix and the combination is a soothing emulsion. Let us mix a little common sense with our medical oil and water and I think the product will also be of benefit to humanity. Reorganization is not only necessary in the homeopathic but in all other professional departments on the campus. At this time, with a large physical laboratory, we have physics taught in both the medical and pharmaceutical faculties. Embryology is taught by three, and histology by two lecturers. Repetitions occur on every hand and thousands of dollars annually could be saved to the state by proper regulation of all departments.

The eclectic school of medicine, a very reputable set of men practicing in this state, is now knocking at the door of the legislature for admission to the medical department of the University. They ask four chairs to start with; this means more anon, with a hospital and all other cost of running expenses. The only trouble is they are numerically weak and the experiment must end in even greater financial loss than has attended teaching in other schools.

There are less than two hundred eclectics in practice in this state, although some claim two hundred and twenty. Only one doctor in ten, on the average, has a student. This would give them twenty students in the state. Then all could not be expected to attend the University, and on an average one-third would go out of the state, leaving fourteen students from this state to attend school. Now, if as many come from out the state the school could open with a maximum of thirty students and could never be expected to have much of an increase under present conditions of entrance, time of service, et cetera.

These men are tax-payers and so are their patients, and in time, if not now, some concessions will have to be made them. Any business man can guess the tax-payers' end of the movement after glancing at the history of the other medical schools.

Hundreds of guesses have been made as to the motive of my advocating amalgamation. The homeopaths claimed that I was selling out; the regulars, so-called, that I had a desire to ruin their school. My desire is to see medicine taught in the University: allopathy is only a part of medicine, and homeopathy is also only a part of medicine. I want to see every student taught all of medicine and pass fair examinations on every course, and then in his future practice use his judgment when called to treat the sick as to the agents he will use. If the principles underlying homeopathy are taught I do not consider that the use of the name is essential, as long as the other school or schools of practice use no distinctive titles. What is fair for one is fair for the other; no less, no more, should be the motto of each.

When I first made my proposition to your honorable body I made it knowing all the financial facts I have recited. I hoped amalgamation on a fair basis could be brought about by your aid and influence. I was happy to be assured that you desired to correct the evils we all knew to exist, and that you were unanimous in wishing to settle all questions fairly and squarely. Homeopathic calamity howlers raised the cry that you desired to get rid of homeopathy and that I was selling out. Some of my friends on this board pointed out that if I persisted it would end in losing my place and advised me not to do it. I chose to persist as I did not care for the professorship under existing conditions. If a new faculty takes hold they will find rules which close the doors on all but the very best of students, and these will not stay here for four years and finally face a jury, the vote of any one of which is liable to put the stain of incompetency on them and cause the loss of their time and money. The school must always be a dismal financial failure under existing conditions. I do not believe the commonwealth should squander money in this way when honest men are without work, and women and helpless children are crying for bread.

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MEMOIRS.

TUBERCULAR DISEASES OF THE KNEE-JOINT.*

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When, on January 9, I received an invitation from Doctor Miller to read a paper before this society on some surgical subject I hesitated to comply, for the reason that the time was too short to prepare an article which would be worthy of the occasion. My desire to be present, however, overcame my scruples, and I have undertaken to present, in a concise way, the conclusions to which a pretty large experience in the treatment of diseases of the knee-joint has led me as to the diagnosis and treatment of tuberculosis of that joint. You will, of course, not expect a finished production, in the following hastily prepared epitome.

While all tubercular troubles of the bones and joints have a common pathology their course and tendencies are nevertheless varied considerably in the different parts of the body, and it is necessary in every case to study accurately the local peculiarities which will influence the prognosis of the disorder. Thus all such diseases in the lower extremity are more malignant than in the upper, owing doubtless to the fact that the weight of the body and the friction produced in walking materially lessen the chances of recovery in the lower limb. A consideration of the anatomy of the hip, knee and ankle-joints will show why tuberculosis of these joints presents different phenomena according to the articulation involved.

The hip-joint is a ball and socket joint with motion in every direction. Its articulating surface is round and small and any pressure on it is confined to a small area and is not as in the knee or ankle distributed over a large surface. Its ligaments are long and lax and the joint is held together chiefly by atmospheric pressure. It is buried deeply among the most powerful muscles of the body which surround it completely. When pus forms in or around it the tendency, caused by its environment, is for the morbid fluid to gravitate down the femur, and to approach the surface by circuitous channels. These conditions cause tuberculosis of the hip to be marked by great reflex muscular irritation, and great but spasmodic pain. The disease is apt to become very destructive from the gravitation of pus, and in its late stages the femur is frequently diseased nearly to the knee-joint. The eroded acetabulum is also liable to perforation and some cases are complicated with vast pelvic abscesses which eventually bring death to the patient. For these reasons the treatment must in the beginning be prompt and thorough. Abscesses must be carefully watched and early opened. On the other hand excision in the later stages is of little advantage on account of the extensive implication of the bones.

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*Read before the Calhoun County Medical Society.

The ankle-joint is a ginglymoid joint of wide surfaces, surrounded by tendinous structures of small thickness and with one exception of not great strength. The large cartilaginous surfaces permit the shifting of the weight from one point to another and patients are thus enabled to avoid the pain caused by pressure and friction on the diseased points. There is little reflex spasm connected with tubercular trouble of this articulation, but the close connections of the ankle-joint with those of the tarsus furnish channels for the conveyance of contagion to all the tarsal articulations. It is difficult, therefore, to limit the progress of disease to one joint and excision, if performed, has to be frequently repeated unless at the very beginning the whole tarsus is removed.

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Now, if we compare the knee-joint with these, we find that it is more superficial than either, and that the anatomical arrangements by which the ligaments are inserted into the tibia are such as to form a secure barrier to the gravitation of pus. The tendency of tubercular disease to spread is limited to two directions —one through the large bursal extension of the synovial membrane under the quadriceps femoris, and the other through the bone substance. Extensive destruction of the bones is less frequent than in the hip or ankle and abscesses, of the soft parts are found above, but almost never below, the joint. There is less reflex spasm than in the hip but more than in the ankle, but the tendency to pathological dislocation is greater than in either. The joint is the largest in the body and is very complicated. It contains an immense stretch of synovial membrane, wound in and out over the crevices in the anterior, lateral and capsular ligaments, the semilunar cartilages and crucial ligaments, and serves to divide the joint into pockets in which morbid products may become buried. This makes it difficult to drain the joint when it has become the seat of suppuration. There are bursal sacs under the ligamentum patella just above its insertion into the tibia, one over the patella, one beneath the outer head of the gastrocnemius, one beneath the tendon of the popliteus, one above that tendon between it and the external lateral ligament, one under the inner head of the gastrocnemius, one between the tendon of the semimembranosus and the head of the tibia, and sometimes one between the tendons of the semimembranosus and semitendinosus. All of these bursæ may communicate with the joint and become implicated in a common disorder. Abscesses in them are frequently overlooked and give rise to secondary troubles after operations on the knee. In the early stages of the disease the malady is limited strictly to the joint and to the neighboring epiphyses and bursæ, and it endures in most cases years before surrounding structures become seriously involved.

The disease frequently begins with a history of injury. It is uncertain in what proportion of cases the injury causes the disease and in what it merely discovers it. The knee-joint is especially exposed to hurts which have no permanent ill results in healthy people. If, however, a focus of tubercular disease should exist either in the bone or synovial membrane unknown to the patient, it may be made manifest by some slight injury. The patient, predisposed to look to external agents for the cause of his trouble, attributes to the hurt what in reality the hurt only discloses. I suspect that this is the truth in most cases in which tubercular injury is traced back to previous injury. In some cases no doubt a bruise produces the weak spot in which the bacillus may grow and multiply and thus acts as the exciting cause of the malady.

The first symptoms of tuberculosis of the knee are those of a slowly developing and subacute synovitis. The joint becomes slightly swollen and sore. These symptoms may completely subside, to recur again on slight injury or overwork. The apparent cure is not a real cure. The tubercular focus continues to exist even though the accidental congestion which made it noticeable may have subsided. The history of the case is made up of these repeated attacks of pain and swelling with repeated subsidences. Finally there remains a constant tenderness and tumefaction. Henceforward begins the period of cane and crutch. At times the patient can walk without much difficulty; at times he has to use a cane, and at times to keep his bed. Then comes the gradual pathological dislocation with inability to extend the leg; then great swelling, pain and abscess, and finally destruction of the joint and possibly of the ends of the neighboring bones. In not a few cases the disease stops short of complete destruction and ends in ankylosis. In some of the milder ones there may be recovery with pretty good use of the knee.

It is exceedingly important to distinguish the tubercular from other diseases of the knee-joint for there are no classes of cases which demand such different methods of treatment as the various maladies which affect this articulation The diseases liable to be mistaken for tubercular disease are:

(1) Acute traumatic inflammations.
(2) Chronic traumatic inflammations.
(3) Rheumatic and gouty inflammations.
(4) Septic inflammations.
(5) Syphilitic inflammations and deposits.
(6) Tabetic degenerations.
(7) Hematoceles.
(8) Foreign bodies in the joint.
(9) Tumors of the ends of the bones.
(10) Hysterical simulations of joint disease.

The diagnostic points may be briefly stated thus:

Acute traumatic inflammations are characterized by high fever, great pain and tension, and acute swelling of the joint.

The tubercular disease by its subacute course.

The chronic adhesive inflammation should never be mistaken for white swelling. It is marked by an atrophy of the joint and leg, and a blue and cold integument. The joint looks shrunken and is stiff and painful. It differs altogether in appearance from the swollen indolent and white joint that we find in tubercular troubles. This kind of trouble demands the most active treatment. The patient must be compelled to use it in spite of the pain which use causes. It is astonishing what cures may be produced in these cases by a firm and rational mode of treatment, and because this is so every practitioner should know how to distinguish it from the scrofulous trouble which demands an exactly opposite mode of treatment.

Rheumatic and gouty inflammations are apt to betray their nature by appearing elsewhere. In that case the diagnosis is easy. When, however, the malady is limited to one knee, it may be more difficult. Examination of the urine may throw light on the case; so, too, the results attained by certain remedies. A very acute inflammation is more apt to be rheumatic. The difficulty in diagnosis pertains especially to the subacute and chronic cases. The swelling of tuberculosis is doughy and almost fluctuating. That of rheumatism firm and tense. The case is usually made clear as it progresses by the different course of the disease for the rheumatic inflammation may get altogether well and leave no traces, or, if it works disastrously on the joint, causes the nodular deposits or fibrous adhesions which cripple and disfigure the patient. At this stage, however, diagnosis has ceased to be difficult. The importance of early distinguishing the two kinds of disorder appears plainly when we consider that a rheumatic joint should be moved as early and often as the patient can endure it.

Metastatic septic inflammations leave the history of previous suppurations elsewhere in the body and exhibit the characteristic chills and hectic of this condition.

Tumors in and around the knee are usually of sarcomatous nature and grow without pain and soreness until they have reached a large size. They ordinarily spring from the ends of the bones and cause no bulging by the side of the patella tendon such as we almost invariably see in the gelatiniform degeneration of tuberculosis.

The symptoms of foreign bodies in the joint are too distinct to cause confusion.

Hematoceles may give rise to error. They occur in scorbutic subjects and such as are affected with purpura. They are apt, then, to be associated with hemorrhages elsewhere. In any event they occur rapidly, cause fluctuating tumors, associated often with discoloration of the skin. Their sudden onset should determine the diagnosis. If not, a well disinfected exploring needle will.

Syphilitic and tabetic degenerations occur at later periods of life and have their own peculiar histories. Only in congenital syphilis might there be ground for error and even then the history should easily decide the matter.

The hysterical joint shows no obvious symptoms except those which may be simulated. The loud complaints of pain have no corresponding tumefaction. The apparent stiffness disappears completely under an anesthetic, and the surgeon carefully examining the unconscious patient is unable to discover the slightest impairment of motion or roughness of the articulating surfaces.

There is now in Saint Mary's Hospital a girl of thirteen years who has caused no little mystification among her medical attendants by her peculiar symptoms. As illustrative of this class of patients her history is interesting. I was called to see her early last summer. I found her complaining of pain in the knee and thigh—worse at night, and lameness. Examining her carefully I found the hip-joint with motion impaired in every direction. Forcible movement could not be endured and I had no doubt at the time that she had hip-joint disease. A TAYLOR's long splint was used and the care of the case entrusted to another practitioner. I should say that the surgeon who had treated her before myself had prognosticated disease of the knee-joint. I did not see her again for nearly three months, at the end of which time I was called again. New symptoms had developed. Her foot had begun to twist in at the medio-tarsal and ankle-joints. As this was a new symptom in hip-disease I began at once to distrust my diagnosis, the more so as I noticed that there was absolutely no shrinkage of the muscles of the thigh of that side. I had her removed to Saint Mary's Hospital and carefully examined her under chloroform. I found then all joints perfectly moveable and free from all evidences of disease. The twisted ankle came straight by a few weeks in a plaster bandage, but the knee then became stiff in an extended position. Under an anesthetic the knee is limber enough but otherwise it cannot be bent from the straight line without howls of pain.

In this connection I will say that, except in the very earliest stages of joint disease, there are evidences of change which may be detected even under chloroform. The stiffened joint becomes indeed more movable under the anesthetic, but rarely freely movable. Motion, too, in certain directions is apt to discover some roughness of the opposing cartilages. If, then, the surgeon can with all care discover no symptoms of trouble in the anesthetized patient he may properly be suspicious of hysterical simulation.

I have not mentioned in connection with the general diagnosis the dropsical joints which are now and then met with for the reason that the dropsy is merely a symptom of the trouble. Many of these cases are really tubercular, some are cases of chronic non-adhesive synovitis, and others are caused by a variety of chronic irritants such as foreign bodies, tumors and the like. They are rather to be regarded as complications of other troubles than as diseases *sui generis.*

Age is an important factor in the diagnosis. The most of tubercular troubles of the knee begin in early childhood and youth. It is, however, a mistake to say that they never begin with adults for I have seen a number of cases which have made their first appearance after puberty. It is, however, to be reckoned as a point against the diagnosis of tuberculosis if the disease appears first after the age of twenty-five. We should then be more suspicious of a syphilitic or rheumatic origin. Long-standing tubercular disease is almost invariably associated with atrophy of the muscles above and below the joint. The joint is swollen but the thigh and leg are small and shrunken. The absence of this in cases of long standing should make the surgeon distrustful of his diagnosis. The sub-dislocation of the tibia on the femur, causing flexion and outward rotation of the leg, is almost pathognomonic of tubercular trouble, but occurs only in the later stages of the malady.

If the joint is examined in the early stage of the disorder, tubercular foci may be discovered either in the bone or in the synovial membrane. The former is more frequently the starting point of the malady. When the synovial membrane is alone affected there may be dropsical affections, otherwise the joint is swollen and doughy to the feel. The tubercle in the bone is usually found in the form of a cheesy deposit, that in the synovial membrane as a grayish granulation or papule. Later on the synovial sac and ligaments become infiltrated with a gelatinous deposit which makes a semi-fluctuating thickening of all of the tissues. As erosion proceeds there will be formed a flaky pus which fills the joint and often the surrounding bursæ.

Now, the treatment of this condition in the early stage may be formulated as follows in the order of their efficiency:

(1) Absolute rest of the joint. If this could be enforced for a sufficient length of time at the very onset of the trouble, many cases might be cured which now go on to destructive changes. In the early stage of the disease, however, we are confronted with patients who have not yet learned to comprehend the gravity of the malady and who are for that reason inclined to be impatient with methods of treatment which require much sacrifice of time and convenience. The surgeon himself may feel a little uncertain of his diagnosis and thus valuable time is lost. The question arises how should that rest be obtained. In my judgment the patient should not be put to bed. The loss of vigor caused by prolonged confinement more than offsets the advantages to be attained by the enforced quiet. The application of a plaster-of-Paris bandage to the diseased limb and a high shoe to the foot of the well side and crutches are the most efficient and least injurious means of resting the joint. The child should be absolutely forbidden to step on the affected extremity, but should be encouraged to take all of the exercise and fresh air which may be possible on crutches.

(2) Compression of the joint. This can be accomplished by the immovable bandage which ought to be applied rather too firm than too loose.

(3) Extension by weights. This gives great relief to pain. I doubt greatly whether it is otherwise of much service. In the day the weight of the leg makes sufficient extension while the patient is standing on the other foot. At night a weight of five or ten pounds may be attached to adhesive plasters which run from the tuberosity of the tibia to a point beyond the foot.

(4) The production of passive hyperemia by the elastic bandage. This remedy, which has been vaunted by the Germans as efficient, has in my hands failed to accomplish the desired end. I have now in Saint Mary's Hospital a young lady just recovering from excision of the knee, on whom I kept an elastic bandage for three months without avail. It was applied tight enough to make the knee and leg swollen and blue and kept on every day for twelve hours.

(5) The injection of iodoform emulsion and preparations of iodine into the affected structures. This has also failed to meet the expectations aroused by enthusiastic advocates.

(6) Counterirritants and the application of the actual cautery are of doubtful value.

(7) Massage, a useful but over-praised remedy. In chronic traumatic or adhesive inflammations it cannot be too highly extolled, but accomplishes little in the cure of tuberculosis.

(8) The application of various kinds of plasters, such as lead plaster and the like. I have never been able to see any other effect from these applications than might be attributed to the compression of the diseased structures.

(9) Douches, hot and cold, may be useful in relieving congestion and pain but do little towards a permanent cure.

(10) Internal remedies such as we use for tuberculosis elsewhere, too familiar to require mention.

Now, in reviewing our past experiences in the treatment of these disorders, is there one of us who cannot remember, with a feeling akin to despair, how few patients have recovered with a serviceable limb; how many have gone on from bad to worse, and have passed their lives with crippled limbs and broken constitutions. The question must arise with every conscientious practitioner how long he may properly continue to treat these cases without result; how long he may stand idly by and watch them growing worse before he proceeds to the radical remedy of excision of the diseased structures. Sooner or later, in spite of splints and plaster bandages, the surgeon sees the almost imperceptible retrogression of the tibia on the femur. Every slight injury or overstrain exaggerates the existing trouble. The knee becomes more and more useless and the general health more and more impaired. We all know too well the histories of young lives spent in pain and energies wasted in a futile struggle with disease. There can be no doubt that the rational theoretical treatment of tuberculosis demands the excision of the diseased structures. The question is whether the practical results are such as to warrant the general practitioner in operating on such cases and, if so, when the operation should be advised. However rational a theory may be, there may be circumstances which interfere with its practical execution. Excision of the hip has proved generally unsatisfactory to surgeons. The depth of the joint makes its drainage difficult, the gravitation of morbid fluids causes disease of the shaft far down, and the implication of the acetabulum, and not unfrequently of the inner pelvic wall, make complications which frequently disappoint the most sanguine expectations. For this reason I am reluctant to advise excision of the hip. My experience with the knee on the contrary has been very favorable. The thorough eradication of the disease has in very many cases been followed by the happiest results—not that the motion and function of the joint have been restored, but that patients who have been crippled and even bedridden, obliged to go on crutches, loboriously holding aloft a heavy and painful extremity, have become enabled to walk on a strong if stiff extremity and to regain their health and happiness.

I need not say that there are many patients who are not in condition to bear excision. Where pulmonary troubles complicate the local tuberculosis, amputation should be promptly resorted to and the quicker it is done the better for the patient. After amputation the patient, relieved of a poisonous limb, may possibly recover from his lung trouble, but after excision the pulmonary trouble grows rapidly worse and the patient dies. The same is true of other constitutional maladies which impair the vital force. Amputation will always give more certain relief and make less demand on the strength than excision.

When the local disease is far advanced, excision may come too late to save the limb. It is hopeless when the epiphyses have been destroyed, the bones riddled with sinuses, and abscesses have developed in the soft parts above the joint. In many cases the surgeon who operates must first get permission to amputate if the case requires it for it is not always possible to tell before the joint is opened how serious the disorganization may be. But bearing in mind the limitation of the operation and having secured the full confidence of the patient, together with permission to do all that may be necessary and best, I do not know of an operation which in very many cases will yield more satisfactory results.

As regards the time for its execution I should say that the surgeon should never wait after the tibia has begun to sink out of place on the condyles. When the deformity, which hitherto has been a mere swelling of the joint, begins to be a deformity of contour and position of the limb, the joint has reached a stage in which all other measures are hopeless. It becomes, then, the surgeon's duty to save all that he can from the wreck. In very many cases it is better to operate long before this event, for in many the disease runs a slow course of years, during which the patient is incapacitated for business and is steadily losing health.

Now, regarding the method of operating. We have first to consider the age of the patient. In a young child every effort should be made to save the epiphyses and to injure the bone as little as possible. However fine the immediate result of a complete excision may be in childhood, it gets steadily worse as the patient grows older. The bone ceases to grow at the lower end and the foot of the affected side rises higher and higher in comparison with the other until it ceases to be useful. If, on the contrary, the surgeon proceeds carefully, dissects out all of the synovial membrane and crucial ligaments and contents himself with gouging out of the bone only the actual foci of disease, the little patient may recover with a stiff knee but a useful limb. In some cases motion is retained to a considerable extent. In adults, on the other hand, it is frequently advisable to saw off the articular cartilages in order to bring wide flat surfaces of bone in apposition that they may grow together with a firm, bony union.

I usually begin the operation with a transverse cut below the patella which opens wide the joint. This enables one to see and judge of the extent of the disease. To this cut one is joined on each side, leading up the limb and parallel with it. The flap thus made is turned back and the bursal extension under the quadriceps exposed. This synovial sac is then dissected out. In some cases, as in the last one upon which I operated, it will be found to contain fibrous bodies like melon seeds. In general there will be found a gelatinous degeneration of the synovial membrane and the ligaments which it covers. All this must be dissected carefully away. If there is subluxation of the tibia, its cause must be sought for and will usually be found in contractions of the posterior and crucial ligaments. These contracting bands must be cut and the bone released, care being taken not to injure the popliteal artery which lies just behind and in contact with the posterior ligaments. This being done, the surgeon must carefully examine all of the bursal sacs which may connect with the joint and if they are found distended they, too, must come away. The next step is to carefully examine the bone and to gouge out all deposits of tubercular matter. If the patella is seriously diseased it may be cut away. If not it may be scraped and left in situ. All eroded surfaces must be chiselled off. During the entire operation a rubber band encircling the limb prevents hemorrhage and keeps the field clear. When all diseased tissue has been removed, the bones should be brought in apposition, the lateral and anterior ligaments united with kangaroo tendon, the skin brought together with buried sutures, antiseptic dressing applied and then the whole kept in position by an elastic bandage which reaches from the navel to the toes. I have long since abandoned the suturing of the bones. If a plaster bandage is properly applied and the patient properly enveloped in a quilted padding before it is applied, the bones will usually remain in close apposition without any other mechanical support. Two or three rubber drains carry the serous and bloody ooze into the surrounding gauze. Windows cut in the plaster on the third day permit their subsequent removal and any necessary change of dressing.

In many cases union has taken place by first intention. In some there has been more or less discharge, and in a few the disease has reappeared and necessitated subsequent amputation.

Now, the final results in those cases which have recovered has been most gratifying. The bones usually solidify in a few months. The patient walks then without crutches, loses all pain and discomfort, regains his general health and is enabled to devote himself to his business in life. If, in some cases, secondary operations have to be performed, the result is only a little delayed. If, in others, the leg has eventually to be lost, it is better that even this should occur at a comparatively early period rather than be postponed until the general health has been wrecked in the effort to save the limb.

I believe that these operations are usually too long postponed and that better results would be achieved if surgeons would decide more promptly on operative interference.

HEPATIC ABSCESS OF LONG STANDING CURED BY OPERATION.*

BY F. MAASS, M. D., DETROIT, MICHIGAN.

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HEPATIC abscess is of such infrequent occurrence in northern climates that one must be very careful in diagnosing this malady. Pus accumulations occur around the liver which may be mistaken as being in the substance of the organ itself. The sub-diaphragmatic abscesses, originating from gastric or duodenal ulcers, ascending from the regio-iliocecalis or renalis, and empyema of the gall-bladder must be borne in mind. In the interior of the gland hydatid cysts are occasionally accompanied by suppuration. It is still a question of doubt how often it is caused by microörganisms. The most genuine abscesses of the liver occur in the tropics, following previous dysenteric diseases. The etiology of such abscesses is not yet very well known. KARTOULIS, a prominent Grecian bacteriologist, residing at Alexandria, showed that in the pus of hepatic abscesses in the tropics bacteria are in most cases not found. In late years ameba coli has been designated as the poisoning agent.

The poison, bacterial or other, enters the organ in different ways: first, directly by wounds; secondly, by the vena portarum; thirdly, by the biliary ducts; fourthly, by the arteries of the liver; fifthly, by the vena cava inferior and the vena hepatica, when thrombosis purulenta takes place growing in the direction of the liver, or when the blood flows in a wrong direction. This last mode is somewhat doubtful, but no objections can be made to the other four. You will also find analogies in other organs. An open wound may be poisoned in every spot of the body. The vena portarum is able to carry purulent material from the whole surface of the alimentary canal very much as lymphatic vessels carry poison from the hand to the lymphatic glands of the axilla. Osteomyelitis acuta, ostitis and arthritis tuberculosa are very common examples of importation of bacteria by the arteries. Inflammation ascending in the biliary ducts is the same as pyelitis and pyelonephritis purulenta ascending from the urinary bladder to the kidney or its pelvis. Thus it is often difficult and impossible to find out in a given case by which of these different ways the material entered the organ. Sometimes it can be stated without doubt. For instance, if liver abscess comes on after a purulent wound of the rectum the vena portarum carried the poison.

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* Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

I have made these few remarks to show briefly the present status of the question, and now I will give the report of a case which recently came under my observation:

Seventeen years ago MR. L., aged forty years, was troubled with recurrent jaundice without suffering any pain therefrom. About six or seven years ago the jaundice became persistent. Since that time during each summer the patient has complained of increasing but not continuous pain in the hepatic region, which radiated to the shoulder and the back. During the winter the symptoms almost disappeared. The patient never suffered from dysentery or any other disturbance of the bowels, except after drinking beer, when diarrhea would ensue. Last summer these symptoms were much increased and they did not disappear at the beginning of the cooler season. The patient was taken with very severe chills and suffered terrible pain, especially during the night, making him so desperate that he would pace his room. In the morning he would take large quantities of brandy in order to mitigate the suffering. He could take none but fluid food. At times there were no movements of the bowels, but at other times they were very profuse and of a strong and disagreeable odor. Always for a few days after the symptoms had reached the highest degree the patient would be in a more quiet condition.

Condition on Examination.—Temperature 103°. The fat of the skin and also the condition of the muscles was normal. The sclera and skin showed a grayish-yellow color; tongue coated. The dull sound elicited upon percussion showed the upper boundary of the liver to be in its normal place; the lower boundary was two or three inches below the edge of the ribs. The lower edge could not be felt. The gall-bladder presented itself indistinctly, somewhat like a tumor. The spleen was slightly enlarged to the size of a man's hand; urine clear and without albumin. Every touch upon the liver region caused severe pain.

Diagnosis.—Hepatic abscess.

Operation.—September 30, 1894. Chloroform narcosis. An incision was made about seven inches long over the lower border of the liver following the line of the ribs. The liver was found to be of a very pale color. The substance felt soft and seemed to fluctuate. Tapping by means of a hypodermic syringe was of no avail. The gall-bladder was limp-appearing, its walls were thin, it was half full of fluid and looked as though it had frequently been enlarged by hydrops. No stones were found. No adhesions were here nor on the convex surface of the liver. Examining the upper surface with my hand, I found a very hard spot in the substance beginning about three or four inches above the edge of the ribs. When this was ascertained it became necessary to remove a piece of a rib corresponding to this hard spot, to open the pleural cavity and to cut the diaphragm. After the opening of the pleural cavity was made the lung was not visible, that organ having collapsed upon the entrance of air. The edges of the wound in the diaphragm were now stitched to the skin and the abdominal wound was closed by sutures. Tapping the hard spot by means of a hypodermic syringe failed to reveal any fluid. The tissue in this place seemed very hard and grated upon the needle as though incrusted with a lime formation. I made no further attempts with a larger trochar, but filled up the wound with gauze and dressed it for the second stage of the operation when adhesions would be established. The temperature was normal on the evening of the operation.

October 1: Last night the patient suffered from intense backache; did not sleep all night; no movement; profuse perspiration; thirst, but no fever.

October 2: Condition about the same; an injection of glycerine produced a small quantity of feces.

October 3: This was a very interesting day. In the morning there was pain in the back; temperature 102.6°, pulse 122; about noon a profuse movement; in the evening, temperature 99.2°, pulse 88; no pain. About the movement of the bowels I will speak later.

October 4: I performed the second operation. Chloroform narcosis. Three large trocars were inserted into the abscess as closely together as possible. About one pint blood-stained, odorless, thick pus was discharged and then the flow stopped. The trocars were left in situ and a bandage applied.

In the further course of the illness the patient had no pain whatever as before. The wound, however, was slightly inflamed by the discharge of pus and caused some irritation. Eight days after opening the abscess the tissue between the trocars was destroyed by pressure of these instruments and had disappeared, and now, instead of these three tubes, one large rubber tube was inserted. During the three first weeks after opening the abscess the flow of blood-stained pus was so profuse that every morning bandage and bed-cloth were wet. I think that in every twenty-four hours one half to one-pint of pus was discharged. After this the pus became less and was grayish-white in color.

The evening temperature from October 4 to October 12 was between 100° and 101.4°. The morning temperature was normal. Previous to October 12 the feces were fluid and of a very disagreeable odor; after this they became more normal in every respect. The patient showed an appetite like a convalescent from typhoid fever. The jaundice disappeared very slowly. In the abdominal wound a small abscess had developed following a suture, having been caused by the overflowing pus. Four weeks after the operation the patient left his bed, and five weeks later he left the hospital.

When I saw the patient for the first time in consultation with DOCTORS FLINTERMANN and BRAND it seemed as though nothing but hepatic abscess could be diagnosed. The jaundice, the just perceptible prominence of the chest, the enlargement of the liver, the tenderness below the edge of the right ribs, the chills, all are very significant symptoms. Still, there was room for doubt. The pains were not continuous but came on like bilious attacks. At times it seemed as though the gall-bladder could be felt as a tumor through the abdominal walls.

Therefore, gallstones accompanied by empyema of the gall-bladder could not be excluded. This latter possibility would have been lessened if the movement of October 3 came on before the first operation.

This movement of the bowels delivered feces having a disagreeable odor and the appearance of pus, with parts of necrotic tissue. The microscopical examination showed pus corpuscles enveloped in a mucous medium. I was looking for particles of liver tissue but I did not find any. Without these the pus would take its origin from a hepatic abscess with an opening into the bowels, as well as from an empyema of the gall-bladder.

I said the doubt about the diagnosis would have been lessened but not entirely removed after this experience. An abscess without an opening, I believe, could not cause such pains at intervals, the patient suffering terribly by night and then having painless intervals of two or three or more days. Assuming that there was an opening, the most important part against the diagnosis, abscess of the liver, namely, this extreme change from intensely painful intervals to a painless and apparently normal condition was put aside, and consequently the diagnostic value of the enlargement of the liver and the slight prominence of the lower part of the right chest was increased. The other symptoms could be produced both by an abscess of the liver and by empyema of the gall-bladder. It must be borne in mind, however, that at times a prominence of the gall-bladder seemed noticeable, and that therefore this latter diagnosis before the first operation was not entirely out of the question.

I speak now about the etiology of the abscess. I did not find ameba coli in the pus. The bacteriological examination, made by DOCTOR HAASS, showed a very small number of staphylo- and streptococci. Whether or not they caused the inflammation or came on after the opening into the intestine occurred, cannot be stated with certainty. But the history of the illness would go to show that the first opinion is nearer the truth. Seventeen years ago the patient was suffering from chronic jaundice and gradually the symptoms became more intense. Very likely the catarrhal inflammation and retention of catarrhal secretion caused an ulcer on the mucous membrane which allowed the bacteria to enter the organ.

During the first eleven years of the illness the patient felt relatively well, but later he suffered considerable pain. The onset of the pain seems to be the beginning of the abscess. Now, arises the question—Can an abscess exist for six years and cause symptoms only during the summer? I think it can. The summer is the time of catarrhal inflammation of the bowels. The mucous membrane may close the opening of the abscess partly or entirely by its swelling or by delivering more mucous secretion. In the winter the catarrhal disease decreases or disappears entirely and allows the pus to flow out more freely. With the pressure of stagnant pus removed there is nothing to cause pain. That the abscess was an old one was shown by the hardness of its wall, considerable force being necessary to insert the sharp trocar into it. The surrounding cicatricial tissue seemed incrustated by a lime formation.

I did not try to establish the diagnosis before the operation by using the explorative trocar because there was no place where adhesion would be suspected. It seemed to me more dangerous to tap by means of a trocar, thus perforating the pleural or abdominal cavity or both without protecting adhesions than to open these cavities by cutting and waiting until adhesions had taken place before opening the abscess. It would have been necessary in this case to introduce the instrument very deeply, and even the instrument might not have reached the pus, or it might have penetrated the very edge of the abscess and thus covered with pus cut into some large vessel of the stomach or the intestines. Even though the pus had been reached, being very thick, it would not have passed through a needle of small size, such as it is wont to use in carefully performing this little operation.

In the second operation I first used a very small sound in order to ascertain how far from the surface the hard abscess wall was to be found. The sound stopped at the abscess two or three inches from the surface of the liver. After this was ascertained, I preferred to open the abscess by means of trocars and not by burning. It was easier, quicker and safer to reach the abscess in this way, since the trocars could remain fixed and thus plug the wounded vessels.

Again, just before opening the abdomen by the first operation I could not feel the gall-bladder. Perhaps I was mistaken in feeling it before. Still, the viscus, after I had exposed it by my first operation, looked as though it had been much distended by fluid. It may be that it was emptied when the pus was discharged into the bowels relieving the gall-ducts from the pressure of the abscess.

The patient is quite well now. He has a fistula about two or three inches deep. I do not consider it disadvantageous if this fistula with small secretion should not close. Hepatic abscess often recurs and then the pus can more easily empty through it than cause a perforation into the abdomen or pleural cavity.

PNEUMOTOMY IN PHTHISIS PULMONALIS.*

By HARVEY J. CHADWICK, M. D., Grand Rapids, Michigan.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

To cut into, wash, and drain a cavity in a lung, the products of inflammation, be they caused by dust, tubercular bacilli, or any other irritating substance breathed into the lungs, I believe to be the best treatment known and practiced.

One of the first and best principles taught us in medicine and surgery is the removal of the cause. In phthisis pulmonalis we have as elements of the cause the patient's inherited constitution and environment, his habits and disposition. These predisposing elements are impossible to remove, but they can be rendered nearly harmless by change of climate, scene, and occupation. I believe the great cause we have to combat with medical and surgical measures is irritation and subsequent inflammation and suppuration of the air cells, adjacent lymphatics, and lung tissue; and this may be caused by all kinds of dust, tubercular bacilli, or, frequent attacks of acute bronchitis and exposure.

If we have a patient exhibiting morning chill, afternoon fever, night sweats, early morning cough, with expectoration of broken cells and fragments of connective tissue of the lung mixed with pus globules, and he has continued in this condition, losing flesh for three or four months, I believe the majority of physicians will, after excluding suppurative processes in other parts of the body, and employing the usual remedies with failure to modify or alleviate the symptoms and benefit his patient, conclude that he is dealing with a case of phthisis pulmonalis whether there be tubercular bacilli present or not. He will also conclude, if honest with himself, that the chances of the patient's ultimate recovery, under the use of cod-liver oil, injections into the rectum of hydrogen sulphide, or breathing into the lungs of compound oxygen, or hypodermics of tuberculin and nuclein, are meagre.

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*Read before the Grand Rapids Academy of Medicine.

Pneumotomy is comparatively a new operation. "It has," says DOCTOR N. P. DANRIDGE, in the "Transactions of the New York State Medical Society, 1893," "become a recognized procedure among English surgeons of Australia both before and after suppuration has occurred." HOFMOLK gives forty-five cases of abscesses treated by pneumotomy, with thirty-seven cures; LAPEZ cites thirty-six cases with thirty-one cures. It is not more dangerous to life than laparotomy for removal of pus tubes and uniting intestines, as is shown, I think, by numerous examples we have on record of gunshot and stab wounds of the lungs, and where from other injuries portions of a lung have been forced through the chest wall, the strangulated portion severed, allowing the lung to assume its natural position with the recovery of the patient. It is the only rational treatment. If you have a patient with psoas abscess or suppuration from appendicitis you do not hesitate to either open the cavity yourself, or recommend that it be done as soon as possible, that the cause may escape. Ah, but you say this is an entirely different matter. Here the abscess is dependent upon a local cause for the generation of pus. So it is in the lungs in the beginning, the only difference being that pus cavities in the lungs are slower in forming, because from their inception they have partial drainage through the bronchial tubes by the effort of coughing. One will kill as certainly as the other if an artificial or natural opening is not made for the escape of the disintegrated tissues, the cavity cleaned, and, in lung cavities, lightly packed with antiseptic gauze. The earlier pneumotomy is performed and drainage established in tubercular inflammations attended with purulent expectoration, whether a cavity is formed or not, the better for the final recovery of the patient, for obvious reasons: and I believe that pneumotomy, even in the last stages of phthisis, is the most humane treatment, as the records show that the procedure never fails to relieve.

Sit here by this patient, place your ear over the right lung, hear the air gurgling up through that pocketful of pus. See, he is going to cough; the friends rush to him, pat him on the back and caress him. See him struggle and choke. Ah, a mouthful of yellow pus and decomposed lung substance comes up. See how rapidly he breathes; his pulse a mere thread. How the prespiration stands out on his brow. There, lay him back on his pillow; he is more dead than alive; but listen again, hear the air still gurgling up through the cesspool that he must struggle again and again, day after day, including the lonesome nights, perhaps for months, to empty. What does your judgment tell you should be done? The friends look to you, oh! so eagerly for help, and there you stand, like a defeated conqueror and do nothing, without you quackishly prescribe some anodyne expectorant.

I believe that in phthisis pulmonalis we should throw physic to the dogs and open the chest wall as soon as consent can be obtained. If there is a cavity wash it out with bichloride of mercury solution, pack lightly with some good antiseptic gauze, give your patient good nutritive diet, and I believe you will cure more, be on better terms with your conscience, and a blessing to your patients and society.

ECLAMPSIA*

By W. H. HAUGHEY, M. D., BATTLE CREEK, MICHIGAN.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

OF all the complications accompanying the period of utero-gestation in women there is none exceeding in gravity that of eclampsia. Selecting its victims from all stations in life, we are as apt to encounter it in the palace of the wealthy as in the hovel of the poor; and whether occurring in the early months of pregnancy or at term it is justly entitled to a prominent position among the graver complications of utero-gestation.

The eteology of eclampsia has been pretty thoroughly discussed, and although not yet fully understood, those who adhere to the old theory of albuminuria or renal insufficiency have at least a tangible element upon which to build a line of prophylactic treatment that will, I am convinced, save a great many women not only their lives, but even the jeopardizing of others in the convulsions of eclampsia.

For years it has not been thought that simple albuminuria caused eclampsia, but from the similitude of the convulsions to those of uremia in Bright's disease —first pointed out by FRERICHS in 1851—the opinion gained ground and is still held by many that the convulsions are caused by uremic poisoning. The researches of VIRCHOW show plainly that the kidney changes are usually slight, and that in some women with advanced chronic parenchymatous and interstitial nephrities no convulsions occur. Recent investigations also demonstrate that when kidney lesions are present they are, apparently, only the local expressions of some severe general disease process which often produces more serious disturbance in other organs than in the kidneys, proving the nephritis to be the result, probably, of the same pernicious influence which caused the convulsions. Again, the theory of anemia of the brain will not hold, for autopsies on women who have died with eclampsia show the brain to be as often hyperemic as anemic. The hydremia of pregnancy, which is supposed to cause the cerebral anemia, is of frequent occurrence, but convulsions are quite rare. Reasoning from the clinical condition present, the prodromal gastric, renal, as well as cerebral, disturbances, the rapid overwhelming of the cerebral functions after convulsions occur, the hypothesis of profound poisoning seems to be a rational one, more especially as the anatomical lesions are similar to those caused by such poison as lead, arsenic, phosphorus, snake-bite, et cetera, and advanced thinkers are now seeking for the explanation of the phenomena of eclampsia along the lines of ptomaines found within the body of the pregnant woman. Whether these ptomaines are generated by a bacterium which has been found in the blood, urine, and tissues of eclamptic women, or originate in the fetus and enter the maternal blood through the placenta is not yet decided, but the fact that eclampsia only occurs during utero-gestation and is relieved, often immediately, by the expulsion of the fetus points to the presence of the fetus in the uterus as the primary cause, and the fact that the convulsions often stop with the death of the fetus would seem to indicate that the particular ptomaines are only produced by a living fetus. Following this line of thought still farther it would seem, to me at least, that the normal waste from the fetus is capable, if

*Read before the BATTLE CREEK ACADEMY OF MEDICINE.

allowed to accumulate in sufficient quantities in the blood of the mother, of causing convulsions, as well as the varying anatomical changes found in eclamptic patients.

It is now, I believe, generally conceded that the convulsions are only the symptoms of some disease process connected with which is the poisoning of the maternal blood with urates, ptomaines, productes of metabolism in the placental circulation, et cetera. This toxic condition of the maternal blood increases the irritability of certain brain centers in such a way that owing to the physiological nervous irritation from the pregnancy and the puerperal condition attending it convulsions are produced. The question naturally arises—Is a neurotic individual more apt to have convulsions than one not so constituted? I believe not; neither do I believe primiparæ to be more liable than multiparæ. It is only when the ptomaines, which have a specific action peculiar to themselves, are present in sufficient quantities that convulsions are produced. This may occur as well in multiparæ as in primiparæ, and if it does not it can probably be explained by the natural hesitancy felt by a primipara to consult her medical attendant at the proper time.

Although the diagnosis of eclampsia is a simple matter after convulsions occur, the welfare of patients is greatly promoted if we are able to predict convulsions, and, thanks to the present condition of scientific knowledge, this can, with a great degree of accuracy, usually be accomplished. The presence of albumin in the urine, while not the cause of convulsions, is, if in readily appreciable quantities, of sufficient diagnostic importance to put the medical attendant on his guard, and should it be accompanied by surpression of urine, puffiness under the eyes, general anasarca, headache and vomiting, or any of these symptoms, he may safely predict eclampsia, and the time to elapse before the first convulsion occurs will be longer or shorter according to the number and severity of the symptoms present.

Leopold, of Dresden, says the prognosis is more unfavorable in multiparæ than in primiparæ, and most unfavorable during pregnancy, becoming worse with each succeeding month of gestation; that it is much better during parturition, and most favorable during childbed, which prognosis we must consider correct if we accept the ptomaine theory of causation, though why it should be less favorable in multiparæ than in primiparæ I must confess I cannot understand. Lusk says convulsions occur oftener in primiparæ than in multiparæ—especially elderly primiparæ, in twin pregnancies and in women with contracted pelves. I have never had a case in either twin pregnancy or contracted pelvis and but one out of three in primiparæ. This author also states that they occur epidemically in consequence of atmospheric changes which interfere with the functions of the skin, thus throwing more work on the kidneys.' This may be true for most cases occur either in the spring or fall. I have had two cases in March and two in November, the first one occurring March 10, 1890; the second November 9, 1890; the third March 16, 1891; the fourth November 29, 1891. It certainly is a little singular that the same two months, namely, March and November, should be selected in two successive years by patients under different circumstances and conditions unless atmospheric changes had some, though it may be slight, influence.

Case I was a primipara at six months, though she said four. Aged nineteen years, strong and plethoric. About four years before she had pernicious anemia from which she fully recovered. There were ten convulsions and albumin in large quantities was present. Delivery occurred ten days after convulsions ceased, the child being dead and macerated; breach presentation.

Case II was a multipara who had lately moved to this country from England. She became pregnant, and at seven months developed eclampsia.

Case III was a multipara. Convulsions occurred after delivery of child, were of short duration and soon passed away. The child, strong and healthy, is still living. Forceps delivery.

Case IV resides five miles in the country. Eclampsia occurred at term, the child being still-born.

All the mothers made good recoveries.

The clinical history of eclamptic patients is so similar that I will not give it in full in each case, yet a few general remarks may not come amiss. The patient has usually enjoyed a very pleasant pregnancy, so much so that she has not required, or at least had, the services of a physician. By-and-by the skin will become dry; there may be, for a few days, an increased action of the kidneys, but this will soon decrease. The bowels are usually constipated. There is some swelling of the extremities, puffiness under the eyes, and general anasarca. Bright specks or colors may appear floating before the eyes. Headache and vomiting indicate (when foregoing symptoms are present) a near approach of convulsions. Soon the patient ceases to complain and appears to be sleeping, when the orbicularis muscle will contract, giving the appearance of a pleasant smile to the features, but it is of deceitful import and is quickly followed by convulsive movements of other parts. The eyelids now open and shut rapidly, the ball will roll from side to side or turn upward, the pupils lose all sensitiveness to light, the corners of the mouth will draw, the shoulders alternately draw up and down, the hands clasp tightly with fingers folded over the thumb, the head roll from side to side with great rapidity, and the mouth open and shut quickly. These are the preliminary movements. At this stage a low moan is often heard to escape the sufferer; the jaws are convulsively set, or the lower jaw is drawn to one side; the head is thrown back, the shoulders raised, arms extended forward, hands tightly closed, feet raised until (not always, but often) entire weight of body rests on the sacrum, and now thousands of clonic spasms chase each other over the body with lightning-like rapidity until all are blended into one general tonic convulsion that seriously interferes with respiration and circulation. This terrible condition maintains for from thirty to fifty seconds by which time a condition of cyanosis is produced that seems, to the anxious accoucheur, to be almost incompatible with life, and his peace of mind is not increased by seeing attendant after attendant turn away, sigh deeply, perhaps press a handkerchief to their eyes and say in deep sepulcheral tones, "She's gone," and to hear the groan of "My God" wrung from the depths of the almost heart-broken husband's soul. Soon, either from exhaustion, or (more likely) the accumulation of carbonic acid in the blood, a condition of narcosis is produced and the convulsions cease. The condition closely resembles chloroform narcosis. The patient falls limp, respiration is labored and stertorous, carbonic acid anesthesia is produced and the patient is insensible to pain. As the breathing progresses and the carbonic acid is eliminated sensation returns. She may even look around, talk rationally for a few moments, and then another convulsion is ushered in similarly as the first, thus dashing to earth any and all delusive hopes that may have arisen in the breasts of either friend or physician. After each succeeding convulsion the period of anesthesia is longer and that of lucidity is shorter, and as this vicious cycle continues the lucid interval grows shorter and less distinct until either relief comes through treatment or death claims its victim.

The best treatment we can employ is prophylactic. I have never had a case of eclampsia in a patient that I have been engaged to attend beforehand. Eclampsia selects its victims mostly from those who neglect consulting a physician until the last moment. My cases have all been of this kind. When a physician is called to attend a case of confinement, the patient a stranger to him, and he finds her a strong plethoric woman, passing but little urine, in a condition of general anasarca, it behoöves him to think of the possibility of eclampsia, for it is in this class of women that the complication occurs. I have never seen a case of eclampsia in the weakly. Perhaps it is because of a woman's strength that she fails to consult a physician sooner. Plethoric people are, as we all know, prone to take on flesh, and their blood becomes loaded with the products of waste, and as in pregnancy there is a natural desire to rest and sleep in this class of cases there is every opportunity for the blood to become loaded with deleterious products.

It matters not what the period of pregnancy may be, if the preliminary symptoms of eclampsia are present the indications are the same, namely, to eliminate the poison from the blood in the quickest possible manner. Three natural routes are presented to us—the skin, bowels, and kidneys. The best results are obtained by employing all three of these routes. If the stomach will retain them, hydragogues are indicated, but it usually will not; however, fifteen to twenty grains of calomel in divided doses may be retained, or one-fourth to one-half grain of elaterium, repeated in two hours if necessary (or a drop of croton oil—LUSK). While waiting for the bowels to act you must not remain idle, but envelop the patient in blankets, with bottles of hot water or sacks of boiled corn around her, and either with or without the aid of pilocarpin induce copious and prolonged sweating. If convulsions have already occurred prompt bleeding probably offers the quickest relief of any measure at our command. I would not, of course, advise bleeding in the weak and feeble, but certainly it would be indicated in the strong and plethoric, as my cases all have been. Of remedies used to keep off spasms until the cervix is sufficiently dilated to admit of the application of forceps, or until sweating can be induced and the effect of other remedies attained—as hydragogues, diuretics, et cetera—we have many, among which are chloroform, chloral hydrate, the bromides, veratrum viride, morphia, et cetera. Chloroform, if employed at all, should be used with extreme care for, as LEOPOLD says, "The blood of the patient is already overburdened with carbonic acid and the toxines causing convulsions, and the addition of the carbonic acid of anesthesia simply makes the prognosis worse." DOCTOR H. FEARN, of Brooklyn, in 1871, first, I believe, called attention to veratrum viride in large doses—fifteen minims to a teaspoonful of the tincture repeated every five to ten minutes until the pulse becomes soft or vomiting sets in—as a substitute for blood-letting in convulsions. He claims these large doses are devoid of danger so long as the convulsions last. **Kenyon**, in 1879, praised the drug highly, says it quickly enters the circulation. It enters the vasa vasorum and through them impairs the sensibility of the vaso-motor nerves. The blood-vessels thus lose their tonicity and power to contract, thereby effectually preventing spasms. Personally I have had no experience with veratrum viride in eclampsia, but have relied on the hypodermic use of morphia, one-fourth grain after each spasm (unless too close together), or the rectal injection of potassium bromide and chloral hydrate, thirty grains each, repeated in one-half to three-fourths of an hour if necessary. It is useless to inject less than thirty grains of chloral hydrate at a dose per rectum. This quantity is recommended by **Lusk**, **Leopold**, and others. I have employed it in that dose and repeated the dose four times in two hours without ill effects in one case and five times in another, making 130 grains in two hours in one, and 150 in the other. Chloral hydrate relieves spasm and pain, is comparatively non-toxic, in eclampsia, at least, and acting with the bromide diminishes the irritability of the spinal cord and brain centers, thus lessening the frequency and severity of the convulsions, but it must be given in sufficiently large doses or nothing but disappointment will follow its use. It also relaxes the tissues of the cervix, and will aid the action of **Barnes'** dilators if they are used, thus hastening the possibility for applying the forceps; and it need not interfere with the diaphoretic and diuretic treatment which should be rigidly pursued. There is but one indication to meet and a cool, collected physician will rob even eclampsia of many of its horrors.

In regard to prophylactics (which certainly give the best results) we must be guided largely by the condition of the urine. Whether we accept the ptomaine theory or adhere to the older of uremic poisoning the chemical analysis of the urine will furnish us with evidence sufficient to warrant the application of prophylactic measures in time to derive the benefit therefrom before convulsions appear. If albumin be found at any time in a pregnant woman, in readily appreciable quantities, especially if accompanied by suppression of the urine, the time for active treatment has arrived and the plan referred to above should be adopted and vigorously executed if the case be an urgent one. If the skin, kidneys, and bowels can be kept active we need not fear eclampsia. It never occurs if these three channels of elimination are actively performing their functions.

I wish to be put on record as not being in favor of abortion, which procedure is advocated by some. Two of my cases, numbers two and four, have borne children since without eclampsia under the treatment indicated above, although both had albuminuria and some bloating during pregnancy. If the ptomaines are not allowed to accumulate in sufficient quantity, convulsions cannot occur, and so long as the three channels mentioned are kept operative this condition cannot occur. Case number two became pregnant about one year after eclampsia. When three months pregnant the urine became scanty and loaded with albumin. The skin was fairly active, but the bowels were constipated. She took potassium acetate in ten grain doses four times daily combined with buchu, and a compound cathartic pill at night for the bowels. For a time this met the indications, but occasionally a return of the condition would demand more active treatment at which times she took ten grains of calomel in divided doses, at other times elaterium in one-eighth grain pill repeated every two hours until one-half grain had been taken, and at seven months she took a severe sweat of two hours' duration with the result of bringing forth, at term, a healthy child which is still living and one year of age.

I might further state that this woman came to me when she first became pregnant and begged me to perform an abortion on her because of having had eclampsia before. She has since come and thanked me for not doing as requested.

Case number four also became pregnant again and asked for an abortion. I refused and she took the matter in her own hand and did everything that either women or doctors advised, until, after flowing almost constantly for three months, I was again called. She was now thoroughly frightened and willing to follow advice. She miscarried, however, at seven months, the child living six or seven hours. She had no convulsions, though some albuminuria had been present all during pregnancy. I firmly believe that had this woman followed my advise she would have gone to term and saved her child.

Case number one has not been pregnant since to my knowledge.

Case number three has moved from the city. There was no albumin in her urine at any time. Convulsions only occurred after delivery.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, NOVEMBER 5, 1894.

The President, EUGENE SMITH, M. D., in the Chair.
Reported by LUTHER S. HARVEY, M. D., Secretary.

EXHIBITION OF PATIENTS.

Doctor Walker presented a patient upon whom he had operated for an extreme condition of talipes varus. He had divided the tendo-Achilles and then did Phelps' operation. He divided the ligaments and opened up some of the synovial sacs. The case had been an extreme one and the result very satisfactory. It would be necessary for the child to wear a supporting shoe for a year or more.

Doctor Maass exhibited a patient upon whom he had operated for goitre. He had read a paper on the case at the last meeting. The patient's voice was almost normal.

Doctor Eugene Smith exhibited a patient illustrating the difference between the old and new methods of operating for cataract. The right eye showed the necessity for incising the capsule when operating according to Graefe's method. The vision in the left eye was almost perfect, showing advantage of simple extraction without iridectomy.

EXHIBITION OF SPECIMENS.

Doctor Walker exhibited a specimen showing an anastamosis formed between the stomach and duodenum by a Murphy button used on a dog. The button had been thirty-eight days in passing through. The doctor exhibited also a false membrane that had formed in a bladder upon which he had operated for stone. Also a calculus removed by the suprapubic method, and a thickened tunica vaginalis from a patient that had had hydrocele.

Doctor Chapoton exhibited an aneurism which he removed post-mortem from the patient that had been presented before the society two weeks before. The dilation had begun in the aorta a little above the heart.

DISCUSSION OF PAPERS.

Doctor Ney read a paper entitled, "The Treatment of Congenital Club-Foot." (See The Physician and Surgeon for November, 1894).

Doctor Robbins: I wish to compliment Doctor Ney on the completeness of his paper. I think the prime necessity in these cases is to make the operation thorough. Nothing is gained by incomplete incisions. Open operations are not dangerous and are to be commended. The earlier the operation is performed the more satisfactory are the results.

Doctor Maass: I believe that the treatment of congenital club-foot should begin as soon as possible after the birth of the child. As long as the child does not walk it is proper to make passive movements in the direction opposite the deformity. Apparatus and bandages do not have the desired effect because the feet are small and often very fat. As soon as the child begins to walk the tendo-Achilles and plantar aponeurosis should be divided. After this the foot should be bent with a great deal of force on the triangular splint. The improved position of the foot, obtained by these manipulations, is fixed by a bandage, starch or plaster-of-Paris. The process of bending the foot must be repeated several times. By this method the majority of cases are cured. Any kind of operation on the bones is to be recommended only in the most difficult cases or in cases where the patient demands an immediate cure.

Doctor Walker: Manipulation is of great value, and if persisted in will produce very satisfactory results. An operation, when it is made, should be thorough. Incomplete operations do no good and tend to cast odium on the profession.

Doctor Flintermann: I remember to have seen cases treated in Professor Koenig's clinic as described by Doctor Maass. The forcible breaking of contractions has been followed by excellent results.

Doctor Ney: In regard to tarsotomy, Doctor Maass has said that the removal of bone tends to make the foot too small. I think that in many cases is is impossible to get a satisfactory result without breaking down the bony arch·

STATED MEETING, JANUARY 7, 1895.

The President, EUGENE SMITH, M. D., in the Chair.
Reported by LUTHER S. HARVEY, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Maass read a paper entitled, "Abscess of the Liver." (See The Physician and Surgeon for December, 1894).

Doctor McGraw: It is too late to go into a very lengthy discussion. I was particularly interested in what Doctor Maass said about the difficulty in diagnosis. I call to mind a case in which there was constant pain. I operated and removed four stones. The pain returned and I operated again without finding any stones. When the pain is constant we should operate.

Doctor Maclean: I endorse what **Doctor McGraw** has said. **Doctor Maass** is to be congratulated. Abscess of the liver is not a common ailment. I was impressed with the fact that the aspirator is an unreliable, unscientific and unsatisfactory instrument. Its use is justifiable in some cases, but it is not reliable for diagnosis in deep abscesses. Use the knife.

Doctor Tappey: There were two things which occurred to me while listening to the paper. I believe that pain is not a constant factor. It depends upon the size and position of the abscess. If it is near the surface it is painful; if, on the contrary, it is situated near the center of the liver it will be painless. Pain in this case was due to distention and was a fortunate factor in making the diagnosis. Another point is that the abscess has discharged into the intestinal canal. This is a very fortunate occurrence, as it may discharge into the lung, the pleural or abdominal cavities. Opening into the intestinal tract we would think the most fortunate outcome. This case and others on record show that this is not the finale. The opening becomes closed by catarrhal inflammation followed by the accumulation of pus.

Doctor Walker: The hypodermic needle is of no value for ascertaining the presence of pus, but a good sized trochar is efficacious.

Doctor Imrie: I think we must admit that abscess of the liver is a very rare occurrence in this country. The manner of operating pursued by **Doctor Maass** cannot be questioned.

Doctor Flintermann: The remark has been made that abscess of the liver is of very rare occurrence in this country. I recall three cases in this city that came under my care many years ago. Of later years I have also seen cases in consultation. I have never been able to come to any conclusion in regard to the etiology. It seems to me that the exploratory operation should always be made. Trauma was excluded in the three cases mentioned. Three cases that were operated upon recovered; two that were not operated on did not recover.

STATED MEETING, FEBRUARY 4, 1895.

The President, EUGENE SMITH, M. D., in the Chair.
Reported by LUTHER S. HARVEY, M. D., Secretary.

EXHIBITION OF SPECIMENS.

Doctor Longyear exhibited a vermiform appendix and pus tubes removed by operation. The patient was the mother of two children. When she came to me she had been flowing a number of months. Upon opening the abdomen I first explored the right side and found everything matted together. The appendix was adherent to the tube. There was pus in the appendix and in the tube, showing a connection between the appendix and the tube. Bacteriological examination showed no active microbes in the pus. The operation was performed three days ago. The patient is doing very nicely.

Doctor Campbell exhibited an eye he had enucleated in which the choroid and retina had become calcified. The patient, who was a lady forty years old, gave a history of injury to the eye twenty years ago. She had suffered from inflammation and pain from time to time. The symptoms of pain and inflammation had begun to appear in the other eye, and the injured eye was therefore removed. The choroid and retina had changed to bone.

DISCUSSION OF PAPERS.

Doctor Longyear read a paper entitled, "The Evolution of the Therapeutics of Traumatisms of the Parturient Canal." (See The Physician and Surgeon for March).

Doctor Carstens: Really, I must say that I am sorry the doctor has so thoroughly covered the ground, and that I so thoroughly agree with him. It leaves so little to be discussed. Difference of opinion is what gives interest to a discussion, and when you so thoroughly agree it is no discussion at all. We have all passed through the same experience with sutures; first, the silver wire, then the silkworm suture, and finally the buried animal suture. One objection to the silkworm suture is that patients fail to have them removed. Sometimes they neglect them altogether and your attention is next directed to them when you are called to attend the woman at her next labor. In regard to the perineal rupture, I always advise immediate operation except when protracted labor has caused edema. If these cases are operated on immediately, the wound will gap as soon as the edema disappears. I have remedied this by having a number of perforated shot on the suture and pressing them up as the sutures become loose.

Doctor Huson: I do not agree with **Doctor Longyear** in regard to letting the patient up so soon. It seems to me that patients should be kept in bed more than ten days. I would like to ask if there is not danger of infection in operating on laceration.

Doctor Mulheron: I do not repair a lacerated cervix immediately unless there is arterial hemorrhage. I make a digital examination after some days and if the tear is a severe one I operate immediately.

Doctor Longyear: I use the interrupted suture instead of the continuous suture because straining at stool may cause the entire suture to give way. **Doctor Parker** asks if it is necessary to place the patient on a table. It is not absolutely necessary though convenient. One must make the best of circumstances, sometimes I have operated on my knees. **Doctor Mulheron** speaks of suturing in ten days and says he gets good results. It seems to me no other wound would unite if treated that way and I do not know why this should.

GRAND RAPIDS ACADEMY OF MEDICINE.

STATED MEETING, JANUARY 21, 1895.

The President, AUSTIN J. PRESSEY, M. D., in the Chair.
Reported by LOUIS A. ROLLER, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Harvey J. Chadwick read a paper on "Pneumotomy in Phthisis Pulmonalis." (See page 61).

Doctor Collins H. Johnston: This is a good subject to be brought up here. I think this treatment only suitable for the latter stages of phthisis or when abscesses occur.

Doctor W. H. DeCamp: I never saw a case treated in this way except where there was a distension of the chest walls, and those recovered. They may not have been tubercular. I do not believe the mortality would be decreased by this plan of treatment. I think the lung trouble is secondary and that the primary difficulty is inanition or a lack of nutrition. Our treatment must be in advance of the bacillus. We must get at the stomach and improve the digestion. When the nutrition is well supplied in the system tuberculosis is impossible.

Doctor Greene: While I cannot agree with the author regarding the benefit to be derived from this plan of treatment, there are cases of circumscribed abscesses in which we would be justified in opening the lung cavity if we could locate them. It might prolong life if a large part of the lung was healthy. We have sought in vain for a remedy in this disease, except the benefit we get from feeding and a change of climate.

Doctor S. R. Wooster: Whether the opening of an abscess in the lung would prove beneficial is a mooted question. I have aspirated once, and once inserted a drainage tube. It prolonged life a number of years, and produced relief. I never saw a case of phthisis where there was not an aversion to fat. If we could make our patients take fat and solid food, phthisis would not be as frequent as now.

Doctor R. Peterson: I cannot see anything curative in the method the author suggests if the case is one of phthisis. There is difficulty in locating the cavity. Surgical treatment would, no doubt, give relief; but as a curative agent I cannot recommend its adoption. At the autopsy other organs are seen involved. In cases of pneumonia that go on to abscess it would be of considerable avail if we could make a diagnosis. I think this form of treatment would be applicable to gangrene of the lung.

Doctor Perry Schurtz: I have had no experience in opening the chest in cases of tuberculosis, but I have operated in a case of empyema and found a piece of rubber tubing that had been left in the cavity for two years. I would not open the chest cavity without resecting one or more ribs. I do not believe in making a slit between the ribs, as this does not afford sufficient drainage. We frequently find a mass that will not pass through the drainage tube and it has to be removed with the fingers. I do not consider nuclein any good. It is a dangerous remedy to employ. If used too freely it will cause chills and congestion of the internal organs.

Doctor H. M. King: I have had no such experience with nuclein as Doctor Schurtz mentions. I have used it in thirteen cases and have never seen any untoward results except in one case. I have not yet seen a kidney complication. I do not think we should denounce an agent that has been used so short a time. With care and discrimination in the use of nuclein I believe it well adapted to many cases.

Doctor Harvey J. Chadwick: If any of us wish to learn a subject we must write upon it. I am pleased with the interest the society has taken in this paper.

EDITORIAL ARTICLES.

HOMEOPATHY AT THE UNIVERSITY.

Those who perused and pondered over the address of the Dean of the Homeopathic department to the Board of Regents, an abstract of which appeared in the last number of The Physician and Surgeon, will find equal interest attaches to the report elsewhere published, of the Chairman of the

Committee on Medicine, to whom the communication of DOCTOR OBETZ was referred.

DOCTOR KIEFER fully admits many of the inferences of the Dean's figures as to the net cost of homeopathic graduates to the State of Michigan, and goes so far as to add to the per capita amount DOCTOR OBETZ has estimated by the addition of a *pro rata* expense incurred by the students of the homeopathic department in participating in courses of the regular department. He, however, indulges in some caustic comments upon this expense being termed "a loss." "I cannot understand," he says, "how education, especially education in the theory of Hahnemann, can be called a loss to the state." Truth cannot be attained at too high a cost. It comes high but must be had. "If the cost of maintaining the University over and above what is received from students can with propriety be spoken of as a loss to the state the institution has no right to exist."

The amalgamation of the faculties as proposed by DOCTOR OBETZ is not in accordance with DOCTOR KIEFER's ideas. "The distinctive feature of homeopathy," says the Regent, "is its Materia Medica. Well, then, let us have a chair of homeopathic Materia Medica and Therapeutics in the department of medicine and surgery." In other words, DOCTOR KIEFER proposes that resort should be taken to the original proposition and intention of the legislature to establish a chair of homeopathic medicine in the University. This will probably constitute the leading feature of the recommendation the Regents will make the legislature—to abolish the duplicate chairs and maintain one chair of homeopathic medicine. As a practical solution of a difficult problem from the stand-point of the Regents and the legislature, this proposition will probably commend itself. The effect of the alliance or the quasi-alliance with homeopathy upon the profession, and upon the prestige of the University, must be differently estimated. A circular has already been issued asking for the views of the profession in this matter, and the responses this will call forth will be watched and considered with much interest, as indicative of the true opinion of the modern status of homeopathy.

There will seem to be no reason, why, if homeopathy thus find shelter and protection in the faculty of the regular department, other demands may not be made which will sorely try the dignity and forbearance of the faculty. The eclectics will doubtless demand a chair of eclectic medicine, and other cults may seek representation on the faculty. The present situation is an important one, and the creation of a new precedent will involve consequences of a significance transcending the circumstances that at present demand to be circumscribed. It is to be hoped, therefore, the voice of the profession will be unequivocally heard in this matter.

THE DETROIT HEALTH BILL.

THE long-continued abuse perpetrated upon the community, under the name of the Detroit Board of Health appears to be at length likely to be summarily checked. The hoped-for legislation has been enacted and the constitution of the new board will be such as to make it above and beyond the corrupting local influence which ultimately led its predecessor to expire of gangrenous putrescence.

The corrupt conditions in which the municipal affairs of large cities are involved has seldom been more forcibly exemplified than in the conduct of health affairs in Detroit. The political methods of Tammany have been improved upon, and those who have been entrusted with the charge of important sanitary duties have been notable for an ignorance as pernicious as it was invincible.

Those who deduct moral lessons from contemporary events, will doubtless observe with interest that the nemesis which tardily overtook this perfidious institution was ultimately the outcome of its own innate rottenness. It yielded less to assault from without than from decay within. The discovery of the suppressed cases of small-pox was an event which simply indicated the profound and inhuman depths of infamy to which those could descend who had at one time, however erroneously, been deemed worthy of public trust.

EDITORIAL BREVITIES.

THE BROTHERHOOD OF MAN.

Doctor Eugene Dubois, a Dutch army surgeon stationed at Batavia, has discovered three skeletons in early pleistocene strata of Java which belong to a hitherto undescribed and undiscovered order of primates. The remains will be sufficient for complete osteological comparison, and so far indicate that they pertain to an animal which walked habitually in the erect posture. The study already made of these specimens inclines to the view that they are those of some human progenitor who was more like the lowest men than the highest apes. More will probably be heard from Java of interest to those who concern themselves with our long lost brothers.

A DELICATE QUESTION.

A wealthy insurance corporation, through its medical director, asked Doctor Reed, of Columbus, his opinion regarding the character and status of a professional brother. Doctor Reed gave the desired information and enclosed a bill for services thus rendered the company. The bill and letter of endorsement were returned to Doctor Reed on the ground that this latter had only been requested as a matter of courtesy. Doctor Reed now points out that the company requires this kind of information, and sometimes the information to be given is of such a nature that the interpretation of "courteous" cannot be placed upon it. The company, he maintains, desires the information and should therefore pay for it.

TYPHOID FEVER AND OYSTERS.

Some discussion has recently ensued as to whether the typhoid fever bacillus can be communicated by means of oysters. The oyster-beds are frequently in such a situation as to receive the sewage conveyed by rivers. An investigation recently undertaken by Professor Crookshank seems to prove that while the oyster itself is not likely to be a source of any particular danger, the oyster may very frequently be contaminated with typhoid-fever infected water. The oyster may thus be the means of mechanically transferring typhoid bacilli to the mouth of the consumer. Professor Crookshank says: "I do not believe that either the cow or the oyster can elaborate typhoid fever from sewage. but it is quite possible that oysters may mechanically convey typhoid fever, just as milk mixed with infected water may be the medium for distributing the disease. In both cases it is more than probable that the danger is much exaggerated." The friends of the luscious bivalve will feel happy over this exoneration.

DOCKING HORSES.

THE medical profession always antagonizes any needless cruelty, and there is no doubt the statistics and reports obtained by *Our Animal Friends* will receive considerable notice. In one year alone 107 cases of lock-jaw are said to have resulted from tail-docking. The best veterinarians in the country condemn the practice, and denounce it as cruel, barbarous and unnecessary. It is done partly to meet the demands of fashion, and deprives the animal of its only defense against flies. The mutilation is not effected without much pain, and it is hoped that no doctor will hereafter be seen with a docked horse. The doctor and his horse usually understand and respect each other mutually, and the horse must always expect to find his best friends among the doctors.

MEDICAL NEWS.

THE STATE BOARD OF HEALTH.

A BILL has been introduced into the legislature providing for the reorganization of the State Board of Health. It authorizes the Governor to appoint seven health commissioners whose powers regarding the custody of the public health shall be similar to those of the present board, but in the matter of expenditures they shall be circumscribed. The author, Mr. Miller, of Kalamazoo, says that in drafting the bill the idea has been to secure an efficient and economical administration of the health department and to reform existing health matters. After diligent inquiry he is satisfied that the present board is extravagant in its expenditures, an item of $1,865.92 for one year's printing being cited to substantiate the charge. The bill provides that all the commissioners shall be physicians, a feature that will commend it to the profession.

MEDICAL LEGISLATION.

SEVERAL bills pertaining to medicine are pending in the legislature. One provides for the establishment of two chairs of eclectic medicine in the University. Another provides for a reduction of the number of homeopathic chairs in this institution, and a third provides for the abolition of the regular medical department of the University. In addition to these Doctor G. E. Frothingham, of Detroit, is the promoter of a bill which provides for the abolishment of sectarian (homeopathic) instruction in the University. In a circular issued by the doctor to the profession, the position is taken—"That any medical school, supported by, or under the auspices of, the state, should be broad and liberal; that no teachers of *exclusive* systems, *or with sectarian titles*, should be supported therein, but that the claims of all systems should be fairly presented to the students by non-partisan teachers. If otherwise, then faith-cure, hydropathy, botanical medicine, and every other sect in medicine should have the same recognition and support by the state that has been accorded to the followers of Hahnemann. And in the Department of Literature, Science and Arts, there should be two schools of Political Economy, in one of which students should hear only the doctrine of free trade, while in the other protection only should be expounded. Spiritualists and every other sect should have a separate school of philosophy, while in literature and history every sect should have its own special teachers to give such instruction in these branches as may still further bias their students in the direction they may wish." Besides the foregoing there is the bill that was published in our last issue which provides for the regulation of medical practice in Michigan. In dealing with these bills some spirited discussion will undoubtedly be involved.

THE AMALGAMATION SCHEME.

THE following letter upon proposed changes in the University Medical School is being circulated among the profession.

Dear Doctor: The Department of Medicine and Surgery of the University of Michigan is threatened with an innovation that will degrade it as a scientific school and bring reproach upon its alumni. The following circular letter from the Dean of that department, recently issued, will explain to some extent the change proposed:

UNIVERSITY OF MICHIGAN.
Ann Arbor, Michigan, February 11, 1895.

Dear Doctor: In 1875, the Homeopathic Medical College, of this University, established by the legislature of the State, began its first session with two professors and twenty-four students. These professors occupied the chairs of Theory and Practice and of Materia Medica and Therapeutics, instruction in all other branches of the curriculum being taken by these students in the classes in the Department of Medicine and Surgery. On account of the pronounced opposition to this arrangement coming from the Michigan State Medical Society and the American Medical Association, the clinical professors in the Department of Medicine and Surgery objected to teaching homeopathic students; consequently, subsequent legislatures increased the number of professors in the Homeopathic College to five. The homeopathic students have continued to receive their instruction in chemistry, physiology, anatomy, bacteriology, hygiene, physiological chemistry, physics, pathology, histology, et cetera, with the students of the Department of Medicine and Surgery. The number of students in the Homeopathic College has never been large, reaching a maximum of eighty-eight in the session of 1880–81, and is now reduced to seventeen. Of these, twelve (first and second year students) receive all their instruction, with the exception of lectures in Materia Medica, from the facuty of the Department of Medicine and Surgery. This leaves only five students, to whom the homeopathic faculty must devote its instruction. Now, it has been suggested by both homeopathic and regular physicians that the homeopathic school, as a department, be abolished, and that a professor of Homeopathic Materia Medica and Therapeutics, as the only distinctive feature of the system, be appointed in the medical department. The faculty of the Department of Medicine and Surgery, having respect for your judgment, asks that you express your opinion on the question of accepting this suggestion, on the accompanying sheet, and return to the undersigned before the eighteenth of this month. This letter is sent to prominent men of both schools. Respectfully, VICTOR C. VAUGHAN.

The above letter contains one erroneous statement that ought to be corrected. The clinical professors did not object to *teaching* the homeopathic students; what they objected to was the granting of certificates that were to be construed into a recommendation of such students as competent medical practitioners. These students had never studied regular medicine or therapeutics, and in the opinion of those professors were unqualified to properly treat disease in all its forms, or properly meet the emergencies of practice, hence they very properly objected to assuming any responsibility for their graduation.

After twentv years of lavish expenditure of the people's money, and with all the aid the Regents could bestow, the homeopathic school has proved a dismal failure in comparison with the regular school. It is now reduced to seventeen students. Undor these circumstances, seeing the school dwindling to a condition of insignificance and contempt, Doctor Obetz, the Dean of the Homeopathic College, a few months since proposed amalgamation with the regular school. At a meeting of the Board of Regents, February 6, Doctor Kiefer, Chairman of the Medical Committee, said: "I fully agree with Obetz in the desirability of the union of both schools, but not after his plan. Let us have a chair of Homeopathic Materia Medica and Therapeutics in the Department of Medicine and Surgery, the course to be obligatory on all students of medicine. This is practical, but let there be no division of chemical chairs according to pathies, letting the best man have the chairs regardless of his belief." Regent Kiefer proposes to amend the act of the Legislature of 1893 so that this result can be accomplished. (See *The Detroit Tribune*, of Febru'ry 7, 1895.)

As I understand, the dean and majority of the regular faculty favor this arrangement.

From the above remarks of Regent Kiefer and the letter of Doctor Vaughan, it will be seen that the department is in danger of an action that cannot fail to result disastrously to its influence and prosperity as a regular school of medicine. In this dilemma the faculty needs the wise counsel and generous support of all its friends and alumni. There is no need of their submitting to this degradation, except, through the apathy of the regular profession, they are left to battle the Legislature and regents unaided.

It will be a shame to let a handful of fanatics longer degrade our public school system by the incorporation into the curriculum of the State University, studies which are as absurd as astrology. This has been possible only because regular physicians have neglected to use their influence against it. The homeopaths circulated petitions and presented them to the Legislature, asking that they should be admitted, because, as they falsely asserted, allopaths had been admitted. The demagogues in politics thinking they could gain the support of an organized party and lose nothing by so doing, acceded to their demands. Do you suppose they would accede to the far more just claims of the Catholic church for their protection of school money to maintain separate schools? By no means. Why? Because they know that from Protestant pulpits there would go forth a protest that would consign them to their political graves. They would lose ten votes to secure one.

If regular physicians will only assert their power and influence they can offer the demagogue the same alternative.

Let all the medical sects do what the Catholic church has so uncomplainingly done, that is, establish their own special schools to inculcate their peculiar creeds.

If the state supports for the homeopaths their own school in medicine, then it should establish separate schools for Catholic children, whose parents are also taxed for the support of the public schools.

There is but one way to avoid the destruction of our common school system, and that is by removing all sectarianism from them, whether it be in politics, medicine or religion. Eternal vigilance is the price of every desirable thing, and when in 1851 the Regents of the University declared that it is the duty of every citizen to watch and guard the University assiduously and see that it is not perverted, and especially not used for the inculcation of political or religious dogma, they proclaimed a great truth that applies directly to the case under consideration.

The medical department has continued to maintain its freedom from dogmas, though they have been urged upon it by repeated acts of the Legislature. In 1873 a committee was appointed by the Legislature to investigate the question, "*Is the instruction in the medical department at the present time sectarian in character?*" This committee met at the University, and occupied some days in its investigation. The result showed that the department was entirely free from sectarian teachings, and refused to lend itself to such work. Honorable C. V. Deland was chairman of the committee, and he was also a champion of homeopathy in the Legislature, but he had to join with others in a unanimous report that the charge of sectarianism was a mistaken one.

There is but one way to meet this question, and that is by the abolishment of sectarianism in the University. That is a popular demand, as I learned by the circulation of a petition in 1891, similar to the one I now inclose. I was led to discontinue efforts at that time by request on the part of regular physicians who were anxious to secure coöperation of homeopaths to pass a medical law, and also in deference to some who thought it might interfere with other University appropriations. As it proved, neither of these were valid reasons for so doing, and should not be considered now. Indeed, this is a favorable time to work for this object. There is a bill before Congress to amend the constitution of the United States so that no state can use public funds to susport any "institution, society or undertaking which is wholly or in part under sectarian control." The senior senator from this state, Honorable James McMillan, has publicly declared himself in favor of this policy. He says, "I am in hearty sympathy with the opposition to use the public money for the support of sectarian schools, and always have been. * * * * Already the government has begun the work of withdrawing aid from such schools, and if the present policy shall be pursued, as it undoubtedly will be, five years hence no public money will be appropriated for sectarian purposes." (See *The Detroit Evening News*, December 11, 1894.

I have had a bill introduced into our Legislature for the purpose of abolishing sectarianism from our state institutions. Will you help this good work along? If so, please circulate this petition and get as many as you can to do so. Some of these petitions should be sent as soon as practicable to your senator or representative in the Legislature. Send by registered package or in some way to make sure that it reaches him. You should also write or see him about the matter and make sure that the petition is duly presented. Interest every editor and other influential person that you can in the work. I will be pleased to hear from you in the matter and learn how the work is progressing, and also, if you will, when the time comes, appear before the committee and urge the passage of the bill. If so, I will see that due notice is given to you.

Yours very truly, GEORGE E. FROTHINGHAM.

MINOR INTELLIGENCE.

MASSACHUSETTS has four medical colleges.

PORTLAND, Oregon, has a new hospital for women.

THE female oculists of the United States number 130.

A PURE food bill is pending in the legislature of Michigan.

A PASTEUR Antriabic Institute has been opened in Algiers.

DOCTOR OLIVER WENDELL HOLMES left an estate valued at $72,117.

THE charter of the New York Hospital was granted by George III in 1771.

A CHAIR of Anatomy, Physiology, and Hygiene is recommended for West Point.

THE amalgamation of the three medical colleges of Denver is being considered.

BOSTON has a new free hospital for women. It was formally opened on January 1.

DENVER has a medical college that grants free tuition to students who reside in that state.

BIRMINGHAM, England, has 10,000 unsanitary houses which are inhabited by human beings.

THE homeopaths of Missouri are endeavoring to have a chair established in the State University.

A LAW providing for a state board of medical examiners became effective in Georgia on January 1.

THE faculty of the Medical College of Indiana have decided to erect a new building to cost $50,000.

A NEW club-foot wrench has been introduced by Doctor S. L. McCurdy, of Pittsburgh, Pennsylvania.

THE faculty of the medical department of Yale University has adopted a four-year course in medicine.

DOCTOR J. W. HANCOCK, of Ellsworth, has been elected president of the Wisconsin State Board of Health.

THE Iowa State Medical Society will hold its forty-fourth annual meeting at Creston, on April 17, 18, and 19.

THE Tri-State Medical Society of Iowa, Illinois and Missouri will meet in Saint Louis on April 2, 3 and 4, 1895.

THERE are four physicians in the California House of Representatives—two in the senate and two in the legislature.

THE Washington State Board of Health have decided to establish a laboratory for bacteriological and experimental work.

LIVONIA, a province of the Russian empire, has over 4,000 idiots and lunatics who are without asylum care, and the Association for the Care of Idiots and Epileptics contemplate opening an institution in which they can be received.

THE legislature of West Virginia is importuned to pass a bill requiring electrical execution of the death sentence.

THE fifth district branch of the New York State Medical Association will convene in Brooklyn on Tuesday, May 28.

DOCTOR B. W. PALMER, of Detroit, Michigan, formerly editor of *The Medical Age*, died at Nyack, New York, on January 4.

THE average yearly income of the regular physician at the national capital is $2,000. The maximum income is about $10,000.

THE Academy of Stomatology is the title of an organization recently established in Philadelphia by dental practitioners.

CHICAGO physicians, following the example of their Detroit brethren, will establish a coöperative association for mutual protection.

THE death-rate in cases of diphtheria and croup has been reduced to twenty-one per cent. in New York City by the antitoxine treatment.

THE bill empowering the Governor to appoint a board of health for Detroit has passed both houses of the legislature. It will take effect on March 1.

THE medical schools of Paris have an attendance of 5,144 students: 4,142 are native; 1,002 foreign; 196 are women, only twenty-six of whom are French.

AT the January meeting of the California Board of Medical Examiners thirty-three physicians were granted licenses to practice medicine in that state.

DOCTOR DOMBARD, of Geneva, the leading medical climatologist of the world, is dead. His studies in climatology entitled him to a niche in the temple of fame.

DOCTOR G. C. PEASE, of Kalamazoo, died on January 25, aged fifty years. He was a graduate of the medical department of the University of Michigan, class of 1875.

SAINT LOUIS has given birth to another medical college. It will impart post-graduate instruction, and is designated "The Practitioners' School of Saint Louis."

DOCTOR WILLIAM WOOD, of Grand Rapids, died on January 14, aged fifty six years. The doctor graduated from the medical department of the University of Michigan in 1862.

DOCTOR A. MORGAN CARTLEDGE, of Louisville, Kentucky, has been the victim of blood poisoning, the result of a wound received in an operation for appendicitis.

THERE is a bill before the United States senate which provides for the establishment in Washington, District of Columbia, of a hospital for the treatment of inebriety.

SIBLEY Memorial Hospital at Washington, District of Columbia, was formally opened for patients on February 1. It is located on the corner of North Capitol and Pierce streets.

THE Missouri State Board of Health is charged with unprofessional advertising. It has been distributing literature among the masses, and will be indicted at the next meeting of the State Medical Society.

DOCTOR EDWARD KÜLZ, professor of physiology in the University of Marburg, is dead, aged fifty years. He was known in the profession for his work in diabetes mellitus.

THE New York Post-Graduate Medical School and Hospital has issued its tenth annual report. The number of patients treated in the dispensary is 17,833; in the wards 1,300.

BACTERIOLOGISTS, pathologists and practitioners should know that the new postal regulation prohibits transmission through the mails of "disease germs and matters from diseased persons."

PROFESSIONAL football players in England received $4,000,000 in salaries during the winter of 1893–4. Gate money for the same period amounted to over $20,000,000 for club matches.

BILLS have been introduced into the New York legislature providing for a physician as president of the health board, and the separation of the department of charities from that of corrections.

DOCTOR HERMAN WEBER, of London, has given $12,500 to the Royal College of Physicians as the basis of a prize for the best essay on tuberculosis. The prize will be offered every two or three years.

COLOGNE tippling is indulged in by the women of Paris. The practice prevails among the upper classes principally, who begin by taking a few drops and gradually increase the amount to a glassful.

THE Army Medical School has an attendance of two this year as against seven during 1893–4. The decrease is attributed to the reduction of the number of assistant surgeons in the United States army.

DOCTOR JOSEPH H. DUNNIGAN, of Buffalo, New York, died on January 4 The doctor's demise was caused by diphtheria contracted from a patient. Antitoxine was employed in treatment but to no avail.

THE erection of a statue to Professor von Helmholtz is being considered. The German Emperor has signified his willingness to head the subscription list with the substantial donation of 10,000 marks ($2,500).

THE New York State Medical Society has elected the following officers for the ensuing year: President, Doctor Roswell Park, of Buffalo; vice-president, Doctor William Maddren, of Brooklyn; secretary, Doctor F. C. Curtis, of Albany.

THE Medical and Surgical Society of Baltimore recently elected the following officers for the ensuing year: President, Doctor J. William Funck; vice-presidents, Doctors R. G. Davis and Harry Friedenwald; corresponding secretary, Doctor J. B. Saunders; recording and reporting secretary, Doctor W. T. Watson; treasurer, Doctor A. T. Shertzer.

THE Nevada State Medical Society convened in semi-annual session at Reno, on January 14. The following gentlemen will administer the affairs of the society for the ensuing year: President, Doctor James Guinan, of Carson; vice-president, Doctor P. Manson, of Virginia; secretary, Doctor T. B. Holmes, of Wadsworth. The next meeting will occur at Virginia City on July 1.

A WOMAN named Pantz, residing in the vicinity of Harbor Springs, Michigan, recently became the proud mother of twins. Medical archives are replete with wonderful phenomena but fail to recount an instance of a woman having given birth to a pair of Pantz.

THE income tax will cause physicians to ask about exemptions. Is the physician allowed his car-fare? his carriage-hire? his horse? his office? his private hospital? Is he to have a corresponding allowance made to those engaged in mercantile pursuits?

AT the annual meeting of the Grand Rapids Academy of Medicine, held on February 4, the following officers were elected for the ensuing year: President, Doctor S. R. Wooster; vice-president, Doctor John Brady; secretary, Doctor R. C. Dundass; treasurer, Doctor Earl Bigham.

THE Harvard Medical Society of New York City, at its recent annual meeting, elected the following officers for the ensuing year; President, Doctor Dillon Brown; vice-president, Doctor Charles L. Gibson; secretary, Doctor Theodore Dunham; treasurer, Doctor George E. Brewer.

CONSIDERED from the stand-point of numbers, Philadelphia is the medical centre of the United States. There are 2,400 students pursuing medical instruction in that city, 875 attending the University of Pennsylvania, 700 the Jefferson Medical College, 325 the Hahnemann Medical College, 300 the Medico-Chirurgical College, and 200 the Woman's Medical College.

A FELLOWSHIP has been established in the University of Michigan by Frederick Stearns & Company, of Detroit. It will be known as the "Stearns' Fellowship of Pharmaceutical Chemistry and Pharmacology," and will be maintained two years, $600 being annually awarded the successful candidate in original research. Investigation will be pursued under the supervision of the dean of the department, Doctor A. B. Prescott.

THE Society of the Lying-in Hospital of New York has opened its new institution recently erected at the corner of Seventeenth street and Second avenue. The building has five wards with thirty beds, three examination rooms, and an operating theatre equipped with all the modern appliances required for scientific midwifery, and hereafter an inside service will be conducted in addition to the outside service heretofore in vogue.

A MOVEMENT has assumed proportions in Maryland which has for its purpose the founding of a permanent home for the medical faculty of that state. It is proposed to form a company of all members of the state society who can be induced to take stock; elect officers; incorporate according to the laws of Maryland, and purchase a building centrally situated which shall be rented to the faculty as a home and repository for its books and papers.

DOCTOR J. H. KELLOGG, of Battle Creek, has invented an instrument for draining the abdominal cavity after lavage in abdominal section. It consists of a metal tube about one centimeter in diameter and eight centimeters long, the lower end of which is enclosed in a cage about one inch in diameter. This cage protects the tube laterally and at the lower extremity and serves as a well for the collection of fluid. It affords a drainage area of fifty-six centimeters.

LONDON hospitals treat annually 1,308,813 in their out-patient departments and 83,341 in their wards. In 1893 the expense account footed $3,499,315. During the past eight years the patients have increased forty per cent., the incomes 14.419 per cent., and the expenditures 40.30.

THERE is a bill before the California legislature providing for the establishment at San Francisco of a State Hospital for Indigent Sick and Disabled Persons. It involves an expenditure of $100,000, and the state board of health is mentioned as management with a superintendent at $2,500 per annum.

THE estate of the late Doctor Alfred L. Loomis is valued at $1,000,000. He bequathed $25,000 as a fund for the Loomis Laboratory, the income to be applied to the annual expense account of this institution. The New York Academy of Medicine is remembered in a handsome bequest of $10,000, to be designated the "Loomis Entertainment Fund," the income of which is to be devoted to entertaining fellows of the college.

THE first annual report of the Board of Registration in Medicine of the State of Massachusetts has been issued. The number of applicants for licenses received to January, 1895, was 4,390 and the number of certificates issued was 3,017. The list comprised 2,817 graduates and 200 practitioners of three years' standing. Two hundred and ninety-four applicants were rejected. About 1,000 applications are still to be accounted for, a large number of which are waiting engrossment.

DOCTOR W. A. POLGLASE, of Detroit, has been appointed superintendent of the new Michigan Home for the Feeble Minded and Epileptic, located at Lapeer, the commission to take effect March 1. This institution is nearing completion and will be ready for occupancy in a few months. The position had seven applicants, six from Michigan and one from Pennsylvania. Doctor Polglase is a homeopath, having graduated from the Chicago Homeopathic Medical College in 1878.

THE common council of Milwaukee has charged the health officer of that city, Doctor Walter Klemperer, with overbearing and tyrannical conduct, improper treatment of patients at the isolation hospital, and irregularity in connection with hospital fees. Disposition of the case is pending the action of the council. The doctor formerly had charge of the Wisconsin State Asylum for the Insane, and is considered an expert in mental diseases, being one of the witnesses who gave testimony regarding the sanity of Charles Guiteau when that murderer was on trial for his life.

THE new tariff act provides that alcohol for use in the arts and sciences shall be free of the internal revenue tax. This law became effective August 28, 1894. Two prominent Detroit drug firms recently petitioned Secretary Carlisle for rebate on the alcohol purchased and employed by them in the manufacture of pharmaceutical preparations since the above date. Parke, Davis & Company entered a claim for $22,900.40, and Nelson, Baker & Company one for $6,071.71. These were refused on the ground that regulations could not be drafted that would protect the revenue from fraud. In consequence of this denial the claimants have filed their petitions in the court of claims where the matter will be disposed of during the summer.

THE Illinois legislature is asked to pass a bill providing for a hospital for the insane, the conduct of which to be in accordance with the homeopathic idea of *similia similibus curantur.* The advocates of this measure undoubtedly desire an opportunity to demonstrate the adaptability of a crazy treatment to a crazy person. In ordinary practice homeopathy does not have a fair chance because the infinitesimally inclined, although in a degree *non compus mentis*, cannot be regarded as altogether crazy, and failure of the little pill may possibly be due to this quasi-condition of unsusceptibility. Who can divine but that with a hospital of suitable patients this much abused dogma might not be in position to redeem the tenets of its illustrious motto, and were not the expenditure of $400,000 required to make the experiment the bill would be entitled to the earnest consideration of the legislators.

CONTEMPORARY OPINION.

THE NEVER-ENDING FIGHT.

[THE EVENING NEWS.]

THE doctors of the regular or allopathic school of medicine in this state can hardly flatter themselves that they have settled their controversy at the University by unanimously agreeing that one chair in the medical school there is enough for their homeopathic rivals, while many of them think even that is one too many. If the homeopathic doctors were equally or nearly as unanimous the affair would be settled; but at least two-thirds of them, as canvassed by Professor Vaughan, are not satisfied with that settlement, which will probably settle that settlement. For it is the legislature which must determine the fight, and the legislature is influenced not by the ethics of the profession or by the economies of the plan, but by the votes of their constituents; and the homeopaths, lay and professional, have votes. Even if the present legislature should cut down the homeopathic medical dynamos to one, the next legislature would be assailed and lobbied and petitioned until it gave more and restored the school to some of the proportions and influence it has had before. If they were able to secure a school ten or more years ago, and to dictate its appropriations since, neither the present nor any future legislature is likely to enact anything to which two-thirds of the profession is opposed. The compromise between the regular and the homeopathic schools must command the assent of both. Neither one of them can settle it, and it is absurd and arrogant on the part of either to think they can.

The rancor and mutual intolerance of the two schools are likely always to make trouble until they are fused and united by the professional harmonizing of their views and practice. Even in the replies received by Professor Vaughan, as published in *The News*, this spirit breaks out in the scorn they feel for each other, and especially in the stigma the members of the regular school put upon their rivals. They speak of homeopathy as an "ism" which deserves only one chair; some deny that it deserves as much as that. In the University this feeling crops out more or less in calling them "quacks," and quacking like ducks in the presence of the homeopathic students. In undertaking to provide for both schools the legislature cannot ignore this antagonism. Any enactment or disposition of the subject except one is bound to encounter it. The exception is the abolition, the wiping out of the medical department and going out of the business of providing any student with a profession or means of livelihood beyond the general education and culture which the University as such is only bound to give. The controversy is as certain as the existence of the allopathic and homeopathic schools; as certain as the theological fights that would distract the state were the University to undertake to provide the community with doctors of divinity as well as doctors of medicine.

A SIGN.

[THE CINCINNATI LANCET-CLINIC.]

At the opening of the last meeting of the Cincinnati Academy of Medicine one of the members rose to a question of privilege, in which he stated that, inasmuch as the Academy is a constituent part of the Ohio State Medical Society and of the American Medical Association, and, as such, professes allegiance to the code of ethics of the latter body, attention was called to the frequent presence of newspaper reporters at the meetings, and to the publication of case reports in the daily papers. Whereupon the presiding officer said the point was well taken, and if newspaper reporters were present they would please retire from the room. Three note-books were folded up and their possessors adjourned.

It seems very difficult for newspaper people to understand that there is a line of demarkation over which they should not step, thinking that all news and knowledge should be spread wide open to the world through the newspaper. The special knowledge and skill of the medical profession is never kept as a secret, and yet this same knowledge and skill is the entire capital stock of a corps of ladies and gentlemen who have spent many years and thousands of dollars in the attainment of such possessions.

Medical science is extremely complex, and it is not possible for a newspaper reporter to appreciate the value of this or that statement which he may hear. Furthermore, the reporter is always apt to be biased in the coloring given to the remarks of certain men. Finally, case reports and professional opinions published in the daily papers are always exceedingly harmful to the physician implicated, because they bring him into contempt in the eyes of reputable members of his own profession. Sometimes these newspaper reports of cases and opinions, including abstracts of papers, are so cleverly made as to almost lead to a belief that the doctor himself was a party to the report, but when we consider the infinite importance of the good opinion of those engaged in work in the same profession such thoughts must be put behind us as promptings of the evil one, or as evidence of a determined attempt to commit professional suicide. It was a real pleasure to observe the apparent unanimity of feeling on this subject on the part of members of the Academy.

It is obvious that the place for medical literature and professional opinions is to be found in medical books and medical journals. In these channels there is an abundance of scope and unlimited opportunity. In this connection we cannot refrain from observing that eminent members of the legal profession, of architects, engineers or other callings where special learning is required, are never found giving expression to professional opinions for the benefit of the press and the people. Such special attainments of knowledge are not held as secrets, but are regarded as an invested capital from which there must come some compensatory returns to the individual. From the acts of these gentlemen physicians should learn an object lesson.

CHARACTER.

[THE MEDICAL NEWS.]

In a general way, it is doubtless true that the great mistake of men, of all men, consists in the failure to estimate the value of character. Everybody is prone to put the good of life in something gained or done, in knowledge in some objective thing, as wealth, power over men, ability to make much of self, et cetera. But apart from this general injudiciousness of mankind there are certain ages or peoples which thus err especially and grievously. It is an error, for example, markedly common in a young nation or people, when great public works are to be carried through and tremendous energy is to be put forth or utilized. The man who can win battles, who can plan and build a railroad, who can procure needed legislation, organize and manage manufactories, he is the man people want, and they care little or not at all whether he be honest, pure, high-minded, unselfish, or whether he be the reverse of these things.

By-and-by, however, with a better civilization, there comes the knowledge, gained by bitter experience, that the emotional and moral make-up of a man, his character, as contra-distinguished from his ability to do things, have as much, or more, to do with our trust of him, with his "success" even, as his ability to do things. As more and more men compete for the same office or work to do it is found that the larger type of personality, the man who has character as well as ability, is the better man to endow with trust and power.

It is just in such a condition that we Americans now find ourselves. We have heretofore been content to give over our cities, states, manufactories, banks, and institutions of a thousand kinds to the persons who by hook or crook could get hold of them, or who could do the work required. Now at last we are finding out that upon the quality of a man's personal character, in a word, upon his morality, will depend the success or failure of the thing done, quite as much as or even more than upon executive abilily, knowledge, or will-power. It is not the most expert bookkeeper or cashier that is the best one to put in charge of millions of dollars, but it is the most loyal and honest. It is not the best, most successful administrative ability that now makes the best administrator. In every walk of life, from governing the nation, the city, or the push-cart, we are daily admonished that the perfection of a man's work depends upon the honor and honesty of the man's character. The power of the mere doer, the knowledge of the knower, the skill of the executor, are growing less important, and are coming more and more to depend upon how the thing is done, upon honor and conscience in the doer. In the long run nowadays the man, honest but stupid, if we must drive the comparison to its rather absurd extreme, gains upon the brilliant scoundrel. But as almost no American can be called stupid, so it follows that the combination of conscience with ability now constitutes the highest type of man.

These rather trite truths have their apt and striking application to medicine —but with the proviso that we are hardly yet beyond the first stage of the evolutionary process. We have hardly begun to be more than half conscious of our barbarism of caring nothing for a physician's character, providing he is said to cure disease, or wins "success." The consequence is that we have plenty of medical Tweeds and Tammanies, our thousandfold quackeries, et cetera, all dependent upon the custom of not considering a man's character, but only considering his ability to get official position, or a big practice, to write a book, to deliver lectures, to attract the public eye, et cetera.

Now we contend that it is high time that we undertake the real work of genuine medical civilization. Sincerity and honor are as much needed to make a good physician as trickiness and smartness. The smart man, who is also a trickster, however infernally smart he may be, is henceforth to be more and more avoided. Whatever he says or does he is only after self, and medicine is his ladder and tool. The man whose laboratory-experiments are untrustworthy, who is always appearing in the daily papers under some pretext or other, whose language is habitually a nasty mixture of slang, oaths, or vulgarity, whose private life is filled with trickery and politics—such a man, however "sharp" and "able," is no longer fit to be a teacher of young men; patients should not be sent him, and office should not be given him. A man who makes, derives profit from, or indorses secret preparations should be practically disowned by his fellows in all ways by limiting his power. A man who fleeces the public, and thus injures the reputation of the profession, by charging fees farcically outrageous for inconsiderable operations needs to be incontinently squelched. The man "with a pull," who hoggishly gobbles up and uses for selfish purposes dozens of hospital-positions, excluding other quiet, modest men of equal ability, nay, even holding them in menial subserviency—such men should be avoided by trustees and other dispensers of power. The ringsters who unite into a clique for mutual advantage and profit by all the scheming and politically vile means in their power—they also need disgracing. The huckster, the schemer, the politician (usually he is one person), is to-day the worst enemy of medicine. He corrupts at the source; he is the big quack in the better disguise.

In many ways we need to begin the task of discrimination and of rewarding men of modesty, honor, gentlemanliness, and conscience, instead of neglecting them and filling positions with the schemers, the self-puffers, the newspaper-doctors, and all the "pushers" who use medicine as a mere tool to further self. This is because the method of learning a diagnosis, or of treating a patient, or of doing anything, is often as important as the thing itself, and is indispensable to correct results. The best therapeutist, the best curer of disease, is not he who only knows best, but he who is most conscientious, sympathetic, and self-forgetful; the best surgeon is not the most expert operator, but he who will not operate when operation is not necessary. The most successful physician is not he who has most patients and makes the most money, but he who most successfully cures disease. The best teacher is not necessarily he who talks the glibbest or who is the most "popular," but he who helps his pupils to learn the best and most accurate knowledge, and who inspires them with the enthusiasm for knowledge and for the relief of human ills.

Are you a trustee or a dispenser of office or of power of any kind? There are hundreds of self-respecting, earnest, capable, honest, quiet men who deserve your consideration, and who will fill the position you have to give far better, more to the honor of the profession, more to the good of humanity, than the "hustler," the famous infamous fellow who fills your mail with splendid testimonials of his attainments and capacity, and who cronies with newspaper-reporters, "works the club-racket," and is as careless of medical ethics as he is careful of self-advancement.

If you are no appointment-giver you at times require a consultant. Do you believe you or your patient will secure better advice from the business-doctor, the consultation-hunter, the man with much fame, savory or unsavory? Or, is it not more likely you will do better by consulting with one who studies deeply, who is most scrutinizing, accurate—in other words, whose acts and life bespeak intelligent conscience as the ruling characteristic, and not egotism, "business," or love of fame. At least you are a member of some medical society. Can you not help to refuse office to the office-seeker and the politician? Can you not detect and estop the ringsters when they try to refuse membership to the worthy, and when they try to "run in" the unworthy. Blackballing the good man, receiving the bad man, are too common as they are too frightful mistakes.

In no way can we mold the future and make the world better for our children, freer from disease, than to encourage the formation of noble medical character by helping to office and by rewarding and consulting with those who are seeking to keep their characters pure and clean. In no way are we more recreant to our trust than by giving attention to the advertiser, by helping a despicable character to power simply because he has enormous effrontery and egotism coupled with more or less of flashy superficial medical knowledge and fame.

TEACH MEDICAL HISTORY.

[THE PHILADELPHIA POLYCLINIC.]

THE observant student of human affairs sees frequent illustration of the truth of the maxim that history repeats itself. He sees also that many of the foolish and dangerous repetitions of history might have been avoided had those concerned possessed a realizing knowledge that they were but doing again what had before been done with evil result. The history of medicine presents no exception to the general course. Time and again physicians are led from the safe path of experience into the swamps and bogs of unscientific experiment, by some will o' the wisp of apparent novelty. Time and again the wisdom of the past is contemned because of its apparent conflict with hasty deductions drawn from incomplete data of new discoveries, only to be vindicated and reëstablished by the further progress of science.

Thus the present day, through brilliant discoveries of veritable *materies morbi*, the various ptomaines, and the specific toxines, has restored humoral pathology to more than its former importance. It is true that the crude guesses of our predecessors have been substituted by demonstrated facts; but the great lesson to be enforced is that our predecessors were right in seeking for "peccant humors" to explain certain of the phenomena of disease, and that exclusive attention can no longer be paid by the modern pathologist either to morphologic changes, whether gross or minute, or, as at one time seemed imminent, to the natural history of bacteria. The chemic processes of microbian life and the chemism of the tissues and juices of the animal body invaded by microbes, must be studied in large and small, and with all their complicated reactions and interactions.

But beyond this lies a still greater lesson. Contemporaneously with the revival and reform of humoral pathology, the potentialties, both morbific and salutary, of normal secretions, have received fresh illustrations. The most remarkable therapeutic discovery of modern times is that of the power of preparations of the thyroid gland to relieve the symptoms of myxedema. This veritable discovery has been the excuse for the exploitation of "animal extracts" in general, in a manner and for purposes utterly unjustified by any sound data of observation, experiment or theory.

The student of medical history sees in this but a repetition of many experiences of the past. So, too, the extravagances of modern hypnotism, recall the delusions and impositions of "Mesmerism," "animal magnetism" and the like.

To effectually guard against errors of this and similar nature is probably impossible. Nevertheless much may be done by a proper training of medical students. The history of medicine, its development, its errors, its trials, its triumphs, should be systematically taught by competent instructors at all our colleges. The chair of the History of Medicine should be one of the most important, and by the respect paid to it, the value of its teachings should be emphasized. At this writing we can recall but three American colleges in which lectures on medical history are given, and none in which historical teaching is invested with the dignity and importance that it merits.

RECENT PUBLICATIONS.

REVIEWS.

A MANUAL OF HUMAN PHYSIOLOGY.*

This is an admirable manual of physiology for the student of medicine. Its size does not permit it to do more than to deal with the main facts and principles of the science, but these are elucidated with clearness and precision. The book belongs to a valuable series of students manuals, known as the "Student Aid Series" which are now being issued by a well-known Philadelphia publishing house.

*Prepared with special reference to students of medicine. By Joseph H. Raymond, A. M., M. D., Professor of Physiology and Hygiene in the Long Island College Hospital. With 102 Illustrations in text and four full-page colored plates. "Saunders' New Aid Series." W. B. Saunders, Philadelphia.

THE POCKET ANATOMIST.*

The merits of "The Pocket Anatomist" have been commented upon too frequently to be unknown to the general medical reader. It is needless to say that the new edition contains all the valuable information, which has made the book a vade mecum of the student in the past.

*By C. Henri Leonard, A. M., M. D., Professor of Gynecology in the Detroit College of Medicine. Leather, 300 pages, one hundred and ninety-three illustrations, postpaid $1.00. The Illustrated Medical Journal Company, Publishers, Detroit, Michigan.

THE MEDICAL REVIEW VISITING LIST.*

This visiting-list is on the perpetual plan. It contains in addition to the financial scheme, much information of utility to the physician.

*J. H. Chambers & Company, Saint Louis, Missouri. Price, $1.00.

A TEXT-BOOK OF VOLUMETRIC ANALYSIS.*

The United States Pharmacopeia has been taken as the basis of this work, and the book has been designed with special reference to the needs of the pharmacy student. It appears an admirable text-book, clear and concise in its descriptions, and devoid of all that is superfluous. It may safely be recommended to fulfill the purpose for which it is designed.

*By Henry W. Schimpf, Ph. G., Professor of Inorganic Chemistry in the Brooklyn College of Pharmacy. First edition. John Wiley & Sons, New York.

AN ELEMENTARY COURSE IN INORGANIC, PHARMACEUTICAL AND MEDICAL CHEMISTRY.*

This is an elementary course in pharmaceutical and medical chemistry, and was first published as a series of contributions to *The Pharmaceutical Record.* It appears to be an exceedingly practical manual of the principles of chemistry, or such of them as are of pressing need to the student of medicine or pharmacy. It will doubtless receive a portion of patronage from the students of this science.

*Designed especially for students of pharmacy and medicine. By Frederick J. Wulling, Dean, and Professor of the Practice and Theory of Pharmacy and Pharmaceutical Chemistry at the College of Pharmacy of the University of Minnesota. First edition. John Wiley & Sons, New York.

ELECTROTHERAPY.*

These archives of electrotherapy have been collected by M. Apostoli from those who have given the subject attention in different parts of the world. It contains a copious contribution from America, and will be found invaluable for those who may desire to know what has been done in this branch of medicine. The present volume contents itself in presenting foreign contributions upon the subject, but the compiler promises, that as gynecological electrotherapy is *par excellence* a French triumph, the contributions of his countrymen shall receive adequate recognition in the future.

*Travaux electrotherapie gynecologique—Archives semestrielles d'electrotherapie gynecologique, par Le Docteur L. Apostoli, vice-president de la Societé Francaise D'electrotherapie, Paris.

A COMPEND OF THE PRACTICE OF MEDICINE.*

This is an exceedingly handsome practice of medicine upon which the publisher has expended more than ordinary attention. It is all that a *multum in parvo* should be. Concise definitions and brief descriptions of diseases, and a varied line of the therapeutic measures, are carefully compressed into a few pages. The whole field of medicine is traversed, skin diseases and nervous diseases having been recently added. The book has already passed into a fifth edition, which is a sufficient indication that its merits have not been ignored by the student and practitioner.

*By Daniel E. Hughes, M. D., Chief Resident Physician of the Philadelphia Hospital. Fifth physicians' edition, revised and enlarged. $2.50. P. Blakiston, Son & Company, Philadelphia.

LITERARY MENTION.

"THE International Medical Annual for 1895" is in press, and the publisher, E. B. Treat, of New York, announces its early appearance. Since the first issue of this one volume reference work, each year has witnessed marked improvements; and the prospectus of the forthcoming volume gives promise that it will surpass any of its predecessors. It will be the conjoint authorship of thirty-eight distinguished contributors and specialists, from America, England, and the Continent. It will contain the progress of medical science in all parts of the world, together with a large number of original articles and reviews by authors on subjects with which their scientific reputation is identified.

MEDICAL PROGRESS.

MEDICINE.

REPORT OF THE CHAIRMAN OF THE COMMITTEE ON MEDICINE ON THE COMMUNICATION PRESENTED TO THE BOARD OF REGENTS JANUARY 16, 1895, BY PROFESSOR HENRY L. OBETZ, DEAN OF THE HOMEOPATHIC COLLEGE AT ANN ARBOR, MICHIGAN.*

MR. PRESIDENT AND GENTLEMEN OF THE BOARD:

Your Committee, to whom the communication of the Dean of the Homeopathic College has been referred, reports, after careful consideration of said communication, the following:

The main purpose of the communication is to show to the people of the State of Michigan the extravagance indulged in by sustaining two separate medical schools; that by the acts of the legislatures of 1855 and 1867, only one chair of homeopathy was considered as part of the department of medicine and surgery in the University of Michigan; that in consequence of the opposition of the medical faculty at the time, and the non-establishment of said chair by the Board of Regents, in 1873 by another act of the legislature, an independent Homeopathic College with two chairs, one of theory and practice and one of materia medica was established, and that caused the hostile position of the two schools, ending at last in personal fights between the contending parties. In the course of time three more chairs were added; those of surgery, gynecology and ophthalmology. For the same reasons the homeopaths secured a separate hospital from the state. The last three chairs were established, not because they were needed for homeopathic teaching and instruction, but in order to free the students of homeopathy from the professors of the same courses in the department of medicine and surgery. "Thus a common fight costs the state a hospital, with the annual loss of interest, running expenses, et cetera." To overcome that needless expense, the dean at last recommends the amalgamation of the two schools, and the radical reorganization of the department of medicine and surgery.

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*Read at the meeting of the BOARD OF REGENTS, February 5, 1895.

Without going into all the details of the communication, and omitting all matters of a personal character, I may say that we favor a plan of amalgamation, although we differ with the way of its establishment, as also with many of the deductions and views of the author of the plan. For argument's sake I take all the data given in the communication, as correct. The dean begins with figuring up the accomplishment of the homeopathic college within twenty years and finds that it has graduated 309 students up to date, at a net loss of $154,932.45, or of $500 on every student, exclusive of the interest on the cost of the homeopathic plant. The dean also neglected to count the expenses caused by the courses on the other side, in which the students of homeopathy participate. As the students of homeopathy are making use of these courses it is only just that they should pay their share of the expenses, and the "loss" to the state on each homeopathic student would be considerably swelled. The dean pleases to call the education of a homeopathic student a "loss" of $500 on each student. I cannot understand how education, especially education in the theory of Hahnemann, which, according to his adherents, are the only true doctrines in medicine, proven by facts, can be called a loss to the state. I should think that truth can never be paid for too dearly, and that every homeopathic physician, educated by the state, even at an expense of $5,000 or $10,000, should be considered an immense gain to the state, a capital well invested. Estimating that each homeopathic physician, during a practical life of thirty years, should have saved every year only one patient, who would have died in the hands of an "old school doctor" (an estimate certainly not thought extravagant by our homeopathic friends), and that the earnings of each such patient would have been $500 during his future life, in excess of cost of maintenance, each homeopathic physician would have increased the wealth of the state to the amount of $15,000 on the thirty patients saved by his knowledge. Now, think of the result if each of these gentlemen should save each year, ten, twenty, fifty, or more, out of the hands of the "old school doctors." If the cost of maintaining the University, over and above what is received from students, can with propriety be spoken of as a loss to the state, the institution has no right to exist.

The dean dwells at considerable length upon the sore spot, "the hospitals." He claims that eighty per cent. of all the patients that come to Ann Arbor have no special choice, but the "hackmen" take them to the University hospital. The result is that the latter is often overflowing; the Homeopathic hospital having vacant beds. The same is the case with the students of the department of medicine and surgery, and those of the Homeopathic College. The seats of the former are well filled (without the aid of the hackmen); those of the latter vacant. No one has ever been refused admission to the Homeopathic hospital, or been persuaded to go to the University hospital. When we consider that the department of medicine and surgery has been in existence since 1850, the Homeopathic College since 1873; that the former has graduated 1,630 students, the latter 309; that most of the patients come by the advice of their family physician at home, or by that of their own relatives or friends previously treated at the hospital, it can be easily understood why three times as many patients apply to the University hospital as to the Homeopathic hospital. None are sent away who are willing to go to the Homeopathic hospital; many board outside and come to the clinic daily. Both hospitals are located on the same grounds, parallel to each other, a space of a few hundred feet intervening. Why do the patients take the trouble daily to walk up to the University hospital when they can have plenty of room in the Homeopathic hospital? The latter is by no means so small a building as to be easily overlooked by those patients.

Would this state of affairs be changed if both hospitals were under one roof? I do not believe it, but constant and inevitable friction between the two competing sides would be the result; neither a glorious achievement for the University, nor a commendable example for the students, nor a salutary sight for the patients.

The committee which went east on a tour of inspection did not return with a plan for two hospitals, nor with a plan for one, but with a plan for a hospital. After due and repeated investigation, after hearing both faculties, the board resolved in consideration of all circumstances and with the experience of the past, to build two hospitals side by side, conducted by one superintendent, to be connected in the future by a central building, so that both hospitals would be wings of the same institution. That with the money expended, a greater number of beds could have been secured in one hospital than in two, that is, that one building would have been cheaper than two, I admit; and no one deplores to a greater extent the existing unhappy condition on the campus, than this board. They are a constant source of trouble and annoyance to the board, and besides the amount of money thrown away, take a great deal of the time of the board. The immediate loss to the state by the two separate hospitals as enumerated by the dean, needs a little illustration. "One hospital like Grace could have been placed on the campus, thus saving the purchase of new grounds." There would not have been more ground for such a hospital on the campus than for the two now built; besides, it was the unanimous opinion of the board that the campus was not a desirable location for the hospitals, as the grounds are needed for other purposes, and the hospitals should not be in so close proximity to the other buildings of the University.

The dean further says: "Such a hospital could have been heated from the same heating plant, thus saving an extra plant." That could be done now with the new central heating plant built last summer. It could not have been done with the two old plants, which were insufficient for the buildings then in existence. A future electric plant in connection with the new heating plant will also light the new hospitals on the present location. The statement that one amphitheatre would have been sufficient for two "distinct schools," is certainly a very doubtful one.

As to the charge of "a soft snap" for the superintendent and his family, I must leave the answer to whomsoever it belongs. Neither is this board concerned in the erection of a state hospital for consumptives.

The dean then handles the department of medicine and surgery very severely, "the loose button of the University of Michigan," as he calls it. Now, this very department has in the last years won the recognition of the great eastern schools of medical learning, and what the dean mentions as a cause of impeachment against the board is the very thing the board is proud of. "In 1875 this department had eleven men on its pay-roll, and they drew a salary of $16,041.66. In 1894 there are fifty-nine names on the pay-roll, and the pay-roll is swelled to $43,644, while the students only increased twelve." Has the dean entirely overlooked that medical instruction is quite different to-day from what it was twenty years ago? Perhaps this is not the case in homeopathic colleges, but it certainly is in the "old school." Has the dean forgotten that a number of new courses have been established, such as hygiene, bacteriology, pathology, electrotherapeutics; that laboratory courses have been established in the above mentioned courses, as well as in the courses of physiology, chemistry and others; that some disciplines have so spread out that they occupy two and three separate chairs, as, for instance, surgery, theory and practice, and obstetrics? Does he not know that the professors of the medical department of the University of Michigan are not only engaged in teaching to-day, but also in research work; that the reputation of an institution of learning does not depend as much on the number of students as on the scientific work done by its members? Is he not aware that some of the members of our medical department enjoy well earned reputations not only in the United States but also in Europe?

The board feels well satisfied to have kept pace with the progress of the times, and to have given due consideration to the necessities of the present. There may be a difference of opinion about what is really needed, but we prefer to be in the advance post rather than in the rear guard. Standing still to-day means going backward.

The dean is fearful lest we squander the money of the state. He figures up again the "loss" to the state by educating the medical students in the department of medicine and surgery. He doubles the expenses in a prestidigitatory way, and tells the astonished public that if we go on in this way the state will "lose" in the next twenty years $970,718.07. As a consolation to the dean, I may say that the board has for weeks been closely examining the expenses of all departments and that any retrenchments possible, without crippling the institution, will be made.

As a remedy for all evils, the duplicate chairs, the separate hospitals and the increased and unjustifiable expenditure, and also the "loss" incurred by the state, the dean at last gives the plan of amalgamation of the two schools and reorganization of the department of medicine and surgery. I fully agree with him in the idea of a union of both schools, but not in the way proposed by him. He wants two chairs of Materia Medica, two of Theory and Practice, and the other clinical chairs divided between the two schools. The distinctive feature of homeopathy is its materia medica. Well, then, let us have a chair of homeopathic materia medica and therapentics in the department of medicine and surgery. Homeopathy can have a seat in this department just as well as it has in the state board of health, the local boards of health, and will have in the proposed board of registration; the course to be obligatory to all students of medicine if practical, but no division of clinical chairs according to "pathies." Let the best men have the chairs, irrespective of their pathies. Besides "pathy" exists only on one side, as allopathy is but a nickname. Let us do away with pathies; there is no more common sense in appointing a man to a chair of surgery or gynecology, because he calls himself a "homeopath," or an "old school doctor," than there is in electing a man as sheriff because he is an Irishman, or as county treasurer because he is a German. The professors of the medical department of our University shall be educated, scientific physicians, surgeons and teachers, just as our officials should be good, honest American citizens.

I, therefore, would recommend to amend number nineteen of public acts of the legislature of 1893, by striking out in section one, the words "as at present constituted," also the words "the Homeopathic Medical College," and inserting the words "with a chair of homeopathic materia medica and therapeutics" after the words "department of medicine and surgery."

This would give homeopathy just what the laws of 1855 and 1867 intended to do, and all that is needed in its interests; would take it out of the anomalous position it occupies to-day and put it in its right place as a part of materia medica in medical science; would also show the way for future admittance of the eclectics, who are knocking at the door of the University for entrance, asking only four chairs for a beginning; would save the state annually $8,000 for four duplicate clinical chairs now in existence, and would do away with all fear of discrimination against single students; would give a more thorough medical education to all; would allow ample room in the hospitals for patients; and enable every student to see all the patients, while in the present condition of affairs every student sees only part of them.

The question is, Has homeopathy been introduced into the University of Michigan by the legislature for the benefit of the people, or has the Homeopathic College been established "by homeopathic physicians for homeopathic students?" As an editorial in *The North American Journal of Homeopathy* says ("third series, Volume X, Number I, page 42"): "The legislature has to decide; the board of regents will act accordingly. It will sustain the five chairs 'as at present constituted,' established by former legislatures, as well in the future as during its past administration, if this legislature thinks it in the interest of economy, in the interest of thorough medical education, in the interest of justice to all students," and I may add, in the light of common sense, to keep up the present condition of affairs.

The rest of the proposed reorganization of the department of medicine and surgery is at present under careful consideration by the board of regents, who will act according to their best knowledge and intelligence, and are thankful to the dean of the homeopathic college for his gratuitous, disinterested and philanthropic advice.

HERMANN KIEFER,
Chairman of Committee on Medicine.

OBSTETRICS.

NEVI AND MATERNAL IMPRESSIONS.

SINCE the days when a certain historic progenitor made large capital out of peeled saplings, and probably from an even remoter age than his, there has existed, says *The London Lancet*, among mankind a belief in the causation of birth-marks by previous maternal impression. A singular illustration of this fact is to be found in a case lately recorded by one of the American papers. The mother, an Italian, while pregnant, was frightened by seeing a snake among some fruit she was handling. In due time her child was born, and from birth displayed a peculiar mark upon the neck. This gradually assumed the form and appearance of a serpent, was deeply pigmented, and somewhat scaly. The tale is, indeed, a strange one. Had it come through any less reliable channel than a publication of the Transatlantic press we should probably have dismissed without question its pretensions to veracity. As it is we cannot resist the impression that facts and appearances must have been much exaggerated and altered since the original facts of evidence went on the ever-widening circuit of rumor. Nevi, it is well known, may occupy any part of the surface of the body, may vary indefinitely in shape, are usually pigmented, and frequently possess a thickened and rough integument. In view of these facts it is difficult, even with the aid of a description almost circumstantial enough to find the mimic snake its place among the Reptilia, to resist a conviction that imagination has done much in this history to give color and shape to a clinical curiosity. The whole theory of maternal impression, however appropriate, beautiful, or strange, partakes of a character too nearly related to allegory to secure for its revelations a place among the accredited discoveries of science.—*The Maryland Medical Journal.*

MEDICAL MELANGE.

THE METHOD USED BY THE SOMALIS FOR ENFORCING VIRGINITY.

THE custom of enforcing virginity is adhered to by the Somalis with a most religious strictness (*Indian Medical Record*). The *gabad* or maiden, when seven years old, is forced to submit to a plastic operation, the operator in this instance, as in all other cases of surgical necessity, being the *wadad* or priest. He pares the coinciding edges of the labia majora upwards of three-fourths their length in the antero-posterior direction, and holding them tight between the forefinger and thum of his left hand, effecting thereby the coalescence of the pared margins, he fixes them by means of three stitches. The needle used here is a wooden one, smoothly hewn from the trunk of a certain tree, said to be mentioned to their Koran; and the thread is a coarse, thick twine twisted from the interior of the bark of the very same tree. There is only a very small opening left for the menstrual discharge and the escape of urine, which has to find its way out the best way it can. After the operation the young lady is placed on a mat on the floor of their abode, which is of very frail and temporary construction, specially so intended to meet the requirements of their nomadic pursuits. There she lies for several days, her legs tied together, with no dressing of any sort, except a piece of rag used as a covering for the part, until nature *versus* ill-nature sets up a friendly union of the parts. The *gabad* usually gets married after the age of twelve—that is, if there happens to be a young man about who is desirous of marrying her. The duty of breaking through the dam devolves upon the bridegroom, who is often too shy to undertake such an operating measure, in which case he is replaced by the oldest woman of the family, who, with the help of a small knife, surmounts the difficulty in no time.

QUACKERY.

QUACKERY is of two kinds. There is the educated, pseudo-scientific sort, and the blatant quackery practiced by ignorant charlatans. The latter does little harm, for he who runs may read; but the former is pernicious and far-reaching in its effects. It is the same old story of the comparative attractiveness of vice in high and low circles.—*The Medical Brief.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THE EVOLUTION OF THE THERAPEUTICS OF TRAUMATISMS OF THE PARTURIENT CANAL.*

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THE anatomical parts to be considered under this heading are the cervix uteri, vagina and perineum. The tissues composing these structures are more or less injured in nearly all confinements, and if it were not for the *vis medicatrix naturæ*, the lot of the average child-bearing woman would be indeed one full of pain and suffering, the number of chronic invalids greatly augmented, and the labors of the gynecic surgeon in any community would be regulated to a large extent by its birth statistics. As it is, kindly nature closes many a lacerated cervix and torn vagina, and does her best to fill up the gaps caused by the ruptured and retracted muscles composing the outlet of the parturient canal. Sometimes nature has more than the simple injury to contend with, and is either partially or wholly defeated in the contest, sepsis and lack of continued apposition of the several tissues constituting the opposing forces. The lesser results of septic infection and lack of apposition are: lack of union of the several tissues with healing of the surfaces by granulation, resulting in the formation of masses of cicatricial tissue and the non-union of important muscular structures, with consequent protracted convalescence and future invalidism. The greater results are: so-called puerperal fever, which may be attended with metritis, parametritis, salpingitis and ovaritis, with consequent formation of pus in any of the structures involved, and resulting often in death to the patient.

In the old days, before the laws governing septic processes were as well known as at the present day, and when the parturient woman was placed at the tender mercies of the ignorant midwife, the pathology of laceration of the cervix and vaginal wall was unknown, and that of the perineum known very imperfectly. In those days the question of primary surgical treatment of a lacerated cervix was an unborn thought, while that of the secondary treatment, while having been born, was a monstrosity, as the correct etiology and pathology of the lesion not being understood, treatment was worse than useless. Vaginal laceration received no attention, while binding the patient's thighs together for several days constituted about all the treatment accorded the ruptured perineum. Even at a later date, when primary closure of the perineum was advocated by a few progressive surgeons, the operation was often imperfectly performed by placing the stitches in the outside only, leaving, in cases of vaginal laceration, that part to take care of itself. The old, unhealed wound of the cervix was termed an ulcer, and strong caustics and escharotics were used to cause it to heal. This method of treatment is still in the memory of many of us.

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* Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

At as late a date as the year 1880 the writer saw a whole ward full of women, in a hospital in London, England, under the care of a well-known gynecologist, that were being treated by the application of caustic potash to the supposed ulcers of the cervix. A deep slough followed its application, and the resulting excavation was expected to be subsequently filled with healthy tissue. SCHROEDER, of Berlin, had already practiced partial amputation of the cervix for this condition, which he termed follicular degeneration of the cervix. The operation consists, briefly, of the removal of a funnel-shaped piece of tissue, the small end terminating with the inner os, and then turning in and securing the outer cervical flaps to a shoulder of mucous membrane made at this point. This operation removes the pathological tissue, consisting of granulations, enlarged follicles and cicatricial deposits, very effectually, healing takes place readily and the patients are usually benefited. This was a step in the right direction, but the etiology not being understood, the application of the operation was wrong. It removes not only the pathological tissue but also the healthy tissue of the cervix, which results in a deformity of this structure, shortening it to almost nothing, and this is quite a serious matter, as the leverage that the uterus largely depends on to retain it in its proper position in the pelvis is thus lost.

During the years of 1879 and 1880 the writer witnessed a number of cases of this operation by both SCHROEDER and A. MARTIN, as well as other operations and forms of treatment by surgeons in the hospitals of Berlin, Vienna and London, at this time, but in no case was there observed the application of the only true method to be used in these cases, namely, EMMET'S operation for laceration of the cervix uteri. At this time this operation was a well-known factor in gynecic surgery in this country.

To T. A. EMMET belongs the credit of recognizing the etiology and true pathological condition of these so-called ulcerations of the cervix, and also the application of the only proper and rational therapeutic treatment. The cervix is simply split open by the passage of the child through it—the rent heals imperfectly, or not at all, which results in eversion of its lips, granular tissue is formed, and the irritation of the everted mucous membrane and the granulations cause the follicular degeneration and deposit of masses of cicatricial tissue. EMMET'S operation, besides being correct anatomically, should commend itself to the true surgeon in that it embodies a principle that should ever guide his hand, in the fact that it aims to restore an organ to its normal form and function without the loss of healthy tissue. In the early history of this operation the importance of the entire removal of all cicatricial tissue was not fully appreciated. Denudation by the scissors was recommended, and is still the method used by many operators. Silver wire was, and I believe is still, used by its originator, as the suture material. The sutures were introduced by means of a double thread, which was first passed with a short sharp needle.

The method of denudation by the use of the scissors and the introduction of the sutures in the manner described makes the operation a laborious one. My first effort to shorten the time of operation was by the use of the knife for denudation, and for this purpose I procured an instrument with a short blade bent on the flat at an angle of about forty-five degrees. By introducing this well above the angle of the laceration the denudation of the lower side is first made with one sweep, then after inserting it again at the same point the upper margin of this side is quickly denuded, resulting in the removal of a V-shaped piece of tissue. The depth of the incision, and consequently the thickness of tissue to be removed, is determined by the evident amount of degenerated and cicatricial tissue present. If, after the removal of the V-shaped piece of tissue, cicatricial nodules can be felt with the finger, these should be seized with fine tooth forceps and dissected out with a bistoury. Care should be observed that the denuded surface be not lacerated with tenaculum, or other blunt instrument. When the denudation is complete the surface should be smooth and free from tags of loose tissue. To insure healing by first intention it is also necessary that these surfaces lie easily together, without tension, which they will not do if a mass of cicatricial tissue be left at the angle of the wound.

For a number of years I used the silver wire suture, made fast by twisting, and introduced as before described, by use of the short needle and thread and needle forceps. This method of introducing the sutures often occupied much time, while the removal partook almost the character of a second operation. To obviate the first difficulty I first used an ordinary side-curved handled needle, and afterwards the hollow-curved needle of DOCTOR GAILEY. This shortened the time of introduction of sutures quite materially. To accomplish the easy removal of the sutures I shotted instead of twisting them, placing three (or more in some cases) perforated shot on each, and pinching fast the last one only. By this arrangement of the shot the sutures can be easily removed, through a bivalve speculum, by simply cutting the suture back of the first shot, the other two slipping off, the ends of the suture are readily seen, one of which can be grasped and the suture removed with the dressing forceps. The painful manipulation often necessary in searching in the swollen tissue for the buried loop of suture to be cut, is thus avoided, while the operation can be accomplished without assistance, if necessary. I then substituted silkworm-gut for the silver wire, as it serves every purpose necessary to the success of the operation that the wire does, and has the additional merit of greater flexibility, rendering its removal easier.

During the last year I have made another change in the method of suturing, by the use of catgut, which I consider a very great improvement on the foregoing, in that the sutures require no removal at all, and can be placed quite as easily. I place them by means of a side-curved handled needle having a notched eye near the point. At the end of eight or nine days I find that these sutures have disappeared and that union of the flaps is complete. Thus far no failure has been observed. I use a rather large size chromicised gut which about fills the notched eye of the needle, for if the notch in the needle is not pretty well filled it is liable to catch in the tissues when it is withdrawn.

The method of technique of this operation as now practiced by the writer is briefly as follows: The patient is placed in the lithotomy position with CLOVER's crutch holding the legs firmly in position and the hips resting on a KELLY pad at the end of the table. The vagina is thoroughly douched with a 1–5000 bichloride of mercury solution, which is used constantly during the operation in preference to the use of sponges. The anterior and posterior lips are each grasped, at a point opposite the cervical canal, with a double tenaculum, the upper being held by the assistant, and both instruments left *in situ* until the operation is finished. The V-shaped piece of tissue is then removed with the angular knife, the lower incision being first made, and if the laceration is bilateral the opposite side is treated in like manner. Any cicatricial tissue remaining is removed with tissue forceps and bistoury. Then, with one hand grasping the lower tenaculum and finger in cervix, the needle is passed and the first catgut suture drawn through, it being placed well to the apex of the incision so that it may control any troublesome hemorrhage. Sutures are tied as placed, first all on one side, and then the other, and ends cut short, care being taken constantly, as the freshened surfaces are appoximated, that all clots and other debris be washed away by the constantly-running douche. When the last suture is tied a drain consisting of a loop of silkworm-gut not more than two inches in length, with a shot pinched on the two ends, is placed in the cervical canal, which serves to insure drainage from the uterine cavity, preventing the retention of clots, et cetera, and also serves to prevent the complete closure of the canal in case the mistake of too free denudation has been made. The tenacula are then removed, the uterus pushed up and a free douching of the vagina completes the operation. The after-treatment usually consists of a daily bichloride douche (1–5000) for three days, then, especially if there be any discharge, a carbolic douche daily until the ninth day, when the seat of operation is examined, the drain removed, and if all is well, the patient allowed to leave her bed. The bowels are moved, either by enema or cathartic, daily, on and after the third day.

The operation performed in the manner described presents all the requisites of an ideal surgical procedure, allowing rapidity in execution, being painless thereafter, avoiding the removal of sutures, and producing a result that is practically perfect.

The question of the immediate closure of the lacerated cervix has not been raised until quite recently, and the opinion of specialists in gynecic surgery seems to be almost entirely in favor of non-interference, excepting in those cases where some serious symptom demands it. In cases of severe hemorrhage occurring while the uterus is well contracted, thus indicating the cause of the flow to be a traumatism below the uterine body, it is clearly good surgery to find the bleeding vessel and stop it by suturing the tear containing it, whether it be in the cervix, vagina or perineum, but the writer is not in favor of subjecting every patient, immediately following labor, to such an examination as is necessary to determine a lesion of the cervix. If every lacerated cervix, like the ruptured perineum, remained ununited, such examinations would perhaps be justifiable, but this is not the case, it being a well known fact that many of these injuries heal without surgical treatment. Not only is this the case, but lacerations which appear quite extensive when seen in the enormously enlarged and flabby cervix immediately after confinement, will often prove to be so small that they can hardly be discovered after involution of the uterus has taken place.

Laceration of the vaginal wall is not usually noticed unless accompanied by rupture of the perineum. These tears, when discovered, should be closed immediately after completion of labor, and this can usually be quickly and efficiently accomplished by the use of the catgut continuous suture Horsehair or silkworm-gut may also be used as a suture material, but have the disadvantage over the catgut of necessitating future removal. Tears of this kind are often very extensive, and when occurring, as they usually do, with rupture of the perineum, it is of the utmost importance that the full extent of the injury be ascertained, and the rent closed from above downward, before the perineum receives the attention that must be given it. With the patient in the lithotomy position the extent of the laceration can usually be very easily ascertained by placing two fingers in the rectum, and with them, turning out the vaginal wall. Retractors placed laterally will also assist in bringing the parts to view, but the operation can be quite readily accomplished without their aid. The writer operated on an ununited perineum, a short time ago, in which the cicatrix indicated that the laceration had begun on one side of the cervix, passed down the whole length of the vagina and merged into the perineal tear. In this case the ruptured perineal tissues had been sutured immediately after labor, but no attention paid to the vaginal extension of the tear. The result was pocketing and decomposition of lochial discharge in the ununited vaginal laceration, septicemia, parametritis with a large exudate in the broad ligament on the side of injury, and non-union of the perineum, causing a protracted illness in bed for several months.

Upon the point of the advisability of the immediate closure of the ruptured perineum there is now happily no diversity of opinion that I am aware of, all modern authorities advocating it without reserve. This concurrence of opinion on a subject that was, but a comparatively short time ago, a mooted point with gynecologists, is doubtless one of the triumphs of aseptic surgery. Only fifteen years ago THOMAS, in his "Diseases of Women," says (page 188): "Upon this point authorities differ widely, some urging immediate action, some advising delay until the effects of parturition have entirely passed away, while others compromise the matter by giving preference to the plan of waiting a few days only. To the first class belong BAKER, BROWN, DEMARQUAY, SCONZONI, SIMON and others of equal weight. * * * Among those opposed to immediate interference are ROUX and VELPEAU; while NELATON, VERNEUIL and MAISONNEUVE advise delay for a few days, when all hemorrhage will have ceased and the edge of the wound be covered by granulations." THOMAS, at this time, took the advanced ground of immediate closure, and warned the reader against neglecting the vaginal aspect of the rupture.

My own practice is to close all ruptures, whether of first, second, or third degree, primarily, which means either immediately after the completion of labor, or within twenty-four hours thereafter. Great care should be taken, not only with the suturing from above to prevent pocketing, but also when closing the perineum proper, that the several muscular structures are perfectly coapted, and with all other severed tissues, placed and held firmly together in position as near as possible to that in which they were before rupture. As the tension here is considerable a strong suture is necessary, and for this purpose I use silkworm-gut, placing the sutures about one-quarter of an inch apart, and inserting them, usually, according to TAIT's method. In this method the needle is not passed through the skin, but being inserted just below the margin of this structure, it is swept around so as to include the tissues in the same manner as with the ordinary stitch. The knot when tied lies between the edges of the skin. The raphe is then completed by using a continuous suture of catgut, and the same piece of catgut used to coapt the vaginal portion of the tear, if left long enough, may be continued here. In cases of complete rupture, where the gut is torn, this laceration should be first closed, also, with the continuous catgut suture, sewing from above down, on the rectal side. In this manner the superficial structures are closed by the catgut sutures, which will become absorbed and disappear in a few days, while the deep structures are firmly held by the silkworm-gut sutures, which shall be removed in ten or twelve days. While the surfaces are being brought together they must be frequently washed with sterilized water or some antiseptic solution, care being taken also that all clots and loose tags of tissue be removed from them.

To perform the operation with the care and exact attention to detail that the procedure demands usually requires the administration of an anesthetic, although in ruptures of the first degree, unattended with vaginal laceration, this could be dispensed with in some cases. The urine should be drawn for the first three days following the operation, the thighs kept loosely tied together and daily antiseptic douches used for a week or ten days, besides frequent bathing of the external parts with the same solution. The use of the TAIT stitch insures the exact closure of the wound without the union being prevented by the inversion of the edges of the skin; besides obviating the irritation caused by the ordinary stitch pulling upon and cutting through the skin. A very useful suture, in cases where the superficial suture is not to be applied, is one devised by the writer several years ago. The suture is passed in the usual manner, through skin and other tissues, then one end is passed through the upper edge of the margin of the skin on each side, and tied to the opposite end, leaving the knot beside the wound and not on it. Inversion of the skin is effectually prevented by this suture.

Secondary operation for ruptured perineum may be performed any time after the third month following its occurrence. About this period of time is necessary to elapse after childbirth for nature to restore the soft parts to their natural condition, without which the best results cannot be expected.

VELPEAU was the first surgeon to practice the operation for restoration of the ruptured perineum. Since his time many forms of the operation have been devised, operators apparently vieing with each other to so vary the existing forms and methods that their names may be made illustrious by being passed down to posterity attached to a perineorrhaphy. To even enumerate the originators of them all would require much space, and to describe the methods would take more space than I have at my disposal in this brief paper, but a few of the names of the originators of different methods applied to this operation will not be amiss. They are as follows: **Velpeau**, **Simon**, **Simon–Hegar**, **Tait**, **Tait–Sanger**, **Simpson**, **Richet**, **Martin**, **Le Fort**, **Lauenstein**, **Hildebrandt**, **Heppner**, **Fritsch**, **Freund**, **Emmet**, **Jenks**, **Skene**, et cetera. The manner of denudation usually determines the method of the operation, although of late years some methods include peculiar placing of sutures as well. The various methods may well be divided into two classes—*complete denudation* and *split flap* operations. Of those of the first class, **Emmet**'s trefoil operation was for a number of years a popular method in this country, but this has quite recently been discarded by its author, who has given us in its place an operation that, from a scientific point of view, is now generally conceded to be the best method of operation of the complete denudation class.

The writer has tried a number of different methods, and as a result has discarded all of those of the complete denudation class, as offering less advantages than those of the split flap method. Objections to the operation by denudation may be stated as follows:

(1) In cases of non-union, after operation, the loss of tissue removed leaves the patient's condition worse than before.

(2) In the removal of a portion of mucous membrane of certain definite shape and size without regard to the shape, extent or direction of the tear, as indicated by the cicatrix, the operation can be properly applied to only those ruptures which are central and confined to the perineum only; being sure to fail of success in cases of lateral rupture, and of but doubtful value where the vaginal tear is extensive.

(3) The denudation is usually too superficial to uncover the ends of the severed muscles, as they retract and lie to a greater or less depth beneath cicatricial and cellular tissues, so that when the freshened surfaces are united the continuity of muscular tissue is not obtained and the muscles are still useless as supporters of the pelvic floor, and the result is a perineum of skin and mucous membrane in many cases.

(4) The sutures as usually used, by drawing and cutting the skin, cause much pain, besides bunching up and strangulating the tissues in such a manner as to interfere with the proper union of the respective tissues.

These objections, in the opinion of the writer, are all obviated by the use of the split flap method and the application of buried animal sutures, the technique of which, as observed by him, is as follows:

After previous preparation of the patient, principally by thorough catharsis on the preceding day, by the use of salines, so that the intestinal tract is completely empty, the patient is anesthetized, placed in the lithotomy position with hips resting on a **Kelly** pad, at the end of the table, and a **Clover** crutch applied. The vagina and rectum are then thoroughly washed out with a douche of a 1–5000 bichloride solution, which is also constantly used during the operation in lieu of sponges. The H-shaped incision recommended by **Tait** is then made, using for the purpose **Bozeman**'s angular scissors. With one finger in the rectum the cross cut is first made, then if the case be one of complete rupture, necessitating the reunion of the sphincter ani muscle, the cuts, one on each side of the anus, made for the purpose of uncovering the ends of this muscle, are now made, and lastly, the cuts, one on each side of the vulva, complete the shape of the letter. In case of incomplete rupture the two lower cuts which form the lower legs of the H are not made. If this method of flap-splitting is improperly and superficially performed—as is often the case—this will end the cutting; but to make the operation a success, more dissection must follow before the sutures are applied. Previous examination should determine the location and extent of the rupture, and this must guide the extent and direction of the dissection under the vaginal mucous membrane. If the laceration has passed, as it often does, up one side of the vagina, rupturing the levator ani muscle on this side only, the dissection is to be carried up only on this side, and these severed tissues brought together with the buried sutures before the suturing of the perineum proper is begun. The vaginal flap is grasped, midway, at the edge, and raised up out of the way of the operator, with a pair of fine tissue forceps or tenaculum, the instrument remaining *in situ* until the completion of the operation. The ordinary hemostatic forceps should not be used in this operation, as by crushing the tissues healing by first intention may be prevented. No hemorrhage will occur that cannot be controlled by the suturing when applied. Reliable, well hardened catgut of small size, may do as a suture material, but the writer prefers the kangaroo-tail tendon suture, selecting the medium sized strands as best adopted to this use, and experience has taught him that the interrupted suture is better adapted to the requirements of this operation than is the continuous suture, although its use requires a little more time. A full-curved HAGADORN, or a side-curved handled, needle may be used to introduce the sutures, which should be placed so that each should include only a moderate amount of tissue, as undue strain on any one point is thus avoided, and when completed the coapted surfaces, when thus formed, will be compact and immovable, and yet not bunched up and distorted as is the case with the large *en masse* suture. Sutures should be so placed as to prevent any pocketing of tissues, and they should be inserted layer on layer until the subcutaneous cellular tissue is reached, when the parallel or lacing stitch brings the skin together and finishes the suturing. When all oozing has ceased, collodion, reinforced by a film of cotton, is thickly applied. This completes the operation for a case of the first or second degree.

When the rupture is complete, and involves the bowel, the technique is much the same, excepting the manner of making the first incision and the use of superficial sutures to close the rent in the bowel. The usual method followed in making the first cut is simply altered to suit the changed condition of the parts, and this is accomplished by splitting the remains of the septum on each side, up to the apex of the notch in the bowel, where the two incisions are united. The other cuts and dissections are then made in the same manner as previously described. Before placing the buried sutures the opening in the gut must be brought together with a very superficially applied continuous catgut suture, from above down to the margin of the anus. It was with much hesitation that the writer first used this suture, as it seemed likely that it might result in the passage of infection to the buried sutures and so prevent union of the parts. Experience, however, has demonstrated that while suppuration does occasionally occur at the site of the closure of the bowel, the proper union of the parts has not been prevented, and the suppuration has ceased under ordinary antiseptic treatment. When approximating the sphincter ani muscle great care should be taken to do this accurately and positively, and two or more strong sutures should be used for the purpose, and they should be well buried and so placed that they will not be too close to either the rectal or skin surface. A bichloride of mercury vaginal douche—1–5000—is used daily for three days following the operation, the urine drawn for some time, and the seat of operation kept as cleanly as possible by the frequent use of antiseptic washes and application of sublimate gauze. The pain following this method of operation is very slight, the patient remaining quite comfortable after the first twenty-four hours. The patient usually leaves her bed on the tenth day and walks about in three or four days after.

There is no objection to making a trachelorrhaphy and an anterior colporrhaphy, in cases requiring either or both, at the same time that the perineum is repaired.

In conclusion, I will say that the application of these methods of treatment to injuries of the parturient canal, besides giving the surgeon the satisfaction of using methods that have all the requisites of ideal surgery, also produce results that, in the opinion of the writer, are more near perfection, in that they place the distorted parts back into their normal position more perfectly, and with the smallest amount of suffering to the patient, than any other methods known to him.

THE RECTAL TUBE: ITS VALUE IN TWO CASES.

By J. R. DODGE, M. D., Hudson, Michigan.

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In *The British Medical Journal* of late date Mr. Harrison Cripps has this to say: "The rectal tube as a means of diagnosis beyond the reach of the finger is absolutely useless." He also speaks of the dangers attending its use and condemns it utterly.

In my experience of many years I have found the rectal tube of great value, and in several cases the undoubted means of saving life, notably in a case of intussusception of the colon which occurred in my practice three years ago. The patient absolutely refused to submit to a surgical operation and I was obliged to adopt other measures. Injections were resorted to and a compress placed against the perineum. About one and one-half pints of water could be injected after which it became impossible to force in more. Finally council was called and after subjecting the patient to an anesthetic the attempt was made to force the intestine apart by means of a rectal bougie. This failed and another violent attempt was made to separate the gut by injections, exerting pressure from below. After several hours of hard work, the patient being exhausted, further attempts were abandoned.

The thought of allowing the young man to die under such circumstances was distressing to me, and I resolved upon making a desperate effort to save him. The next day I went to the drug store and purchased three feet of common rubber tubing three-eighths of an inch in diameter. Armed with this I visited the patient, determined if possible, to pass this tube through and above the obstruction. At this time the condition of the patient was truly deplorable, it being the eighth day of the trouble. Tympanites was extreme, and semi-consciousness prevailed; in fact he was within a few hours of death. Nerved with a determination to relieve this case if possible, I called to my assistance two strong men. The tube was well oiled and fastened to a Davidson syringe. The tube was then slowly introduced and kept firm with water constantly pumped into it. In this way I could to some extent guide the movements at the upper end. My aim was to pass the tube through the constricted opening into the bowel above. After patient manipulation for about an hour, alternately advancing and receding, I finally had the satisfaction of seeing the water, which was being constantly pumped, retained. About eight quarts were thrown into the upper bowel. The patient was then inverted, held up by the two assistants and at a given word they were to suddenly jerk the body upward, I at the same time making sudden pressure downward over the abdomen. This maneuver was practiced two or three times, when finally after laying the patient down the obstruction gave way and several gallons of fluid were precipitated into the bed, fetid gasses escaped in great quantity, and the patient was relieved.

A fear arose that perhaps by tearing the adhesions the bowel might have been rent, but this fear was banished by the lapse of time. The patient made a rapid recovery and remains well. Certainly this young man owes his life to the rectal tube.

Sometime ago I was summoned to see a Miss K., of Pittsford township. She was suffering from what appeared to be a severe attack of constipation. I ordered salines, with copious injections of warm soapsuds. Calling the next day I found no improvement, but on the contrary the patient had suffered excruciating pain in the abdomen, accompanied by severe retching and vomiting. The injections had returned unstained by fecal matter. She gave the following history: Aged fifty years; unmarried. She had been for many years clerk in a dry goods store, and had suffered more or less from constipation for years, gradually becoming worse, but for the year previous had experienced great difficulty in relieving herself even with the aid of the most violent cathartics, very small quantities of feces being voided at a time, and that with much pain, and frequently attended with blood. She had lost flesh considerably of late, and was assuming a waxy look. She had never experienced any particular pain in her bowels except when aroused by the action of cathartics. The lady informed me that she had been treated for liver complaint, dyspepsia, hemorrhoids, et cetera, by numerous physicians.

Fearing that the injections had not been properly given, I set about this unpleasant task myself, assisted by the lady nurse, who pressed firmly against the fundament a folded napkin, my intention being to force the column of water above and beyond the obstruction. About two quarts of water could be injected with ease, but beyond that quantity it would, in spite of any amount of pressure, force its way out from under the compress.

Taking into account the entire situation, I made up my mind that there was a permanent occlusion of the colon. To confirm my diagnosis I attached a rectal tube to a Davidson syringe and carried it up into the bowel about twelve inches, and began pumping in water, at the same time advancing the tube which was kept firm by the water pressure. When the tube had been inserted about twenty inches no water could be pressed out, no matter how much force was used. By withdrawing the tube an inch or so the water would flow out easily and freely, but the moment it was advanced all flowing would cease. I was convinced that the upper end of the tube had wedged into a constriction. I was now prepared to render my diagnosis, which I did unqualifiedly, to the lady and her friends, namely, that there was a permanent occlusion of the colon about twenty inches from the anus, probably malignant.

I suggested a surgical operation as the only procedure that offered any relief, but that under the circumstances a fatal issue would probably ensue. This measure was refused and consequently, after recommending a merely palliative course of treatment, I stepped out of the case. The patient seemed willing to abide by my decision, but the friends a week or so later decided to call in a prominent Toledo physician whom I was invited to meet. The doctor looked the patient over somewhat and to my surprise pronounced it a case of sclerosis of the liver with resultant constipation. Mercurials, with sodium sulphate, et cetera, were ordered, with a request that a semi-weekly report be made to him. I carried out this line of treatment with conscientious exactness for several weeks, when the patient absolutely refused to take any more medicine of any kind, being now convinced that a movement of the bowels was an impossibility. I might add that she invariably vomited the medicine. The only effort from this until death, which occurred in about twelve weeks from my first visit, was to make the patient as comfortable as possible. During all this time not a particle of fecal matter had at any time passed from her bowels, except by way of the stomach, which at times was horrible.

At the autopsy it was found that the liver and stomach were normal. The upper colon was enormously distended with fecal accumulations, while the lower end was entirely empty. A stricture three and one-half inches long, dense and hard, about sixteen inches from the anal orifice, was found, through which it was impossible to pass the smallest silver probe. The unanimous verdict of all the doctors present was that the stricture was schirrus and that a surgical operation would have been of no avail.

The point of interest in this case, to me at least, was the definite location of the malady by means of the rectal tube, which enabled me to take and maintain positive ground as to the outcome, without the fear of a contradiction at the autopsy.

THE PROTECTIVE SUBSTANCES OF OUR ORGANISMS.*

BY KARL SCHWICKERATH, A. M., PH. D., DETROIT, MICHIGAN.

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IN submitting to you this evening a rapid sketch of the researches made of recent years in the domain of "The Protective Substances of our Organisms," I am duly mindful, first, of the honor conferred upon me by the invitation of your President, and secondly, that the great mass of literature on immunity and immunization renders it scarcely possible for the busy practitioner to obtain a clear insight into the latest investigation in this domain.

You know that through the researches originally undertaken by PASTEUR, and very highly elaborated by KOCH, into those diseases which are attributable to infection, one fact was firmly established: that human infection is to be imputed to animated microörganisms. An infectious disease is provoked and maintained by living microörganisms, either directly through their parasitic existence in the organism, or indirectly through the poisons or toxins produced by the microörganisms. We can therefore readily comprehend how an infectious disease may overcome the vitality of the organism. But why does an infected organism not succumb in every instance to attack, despite the fact that the capacity for self-multiplication inherent in the germs is in itself unlimited? NAGELI assumed that certain parts of the organism offer a resistance to the infectious element, varying with different cases, and he regarded the relation between the infectious germs and the vital powers as a "competitive struggle," the number of the infecting germs concurrently present in the organism being naturally the deciding factor in determining the issue of the combat. The morbid potency of the bacteria he explained on the theory that these withdraw from the tissues their best nutritive elements, and from the blood corpuscles the oxygen, forming poisonous products of decay and secreting ferments. The disturbance produced in the human organism by the vegetation of schizomycetes —those bacteria which multiply by division—is followed by reaction, which according to NAGELI tends to restore the normal chemical constitution of the bodily juices. This "competitive struggle" was demonstrated by METSCHNIKOFF under the microscope and formed the basis of his phagocytic theory. METSCHNIKOFF applied the name phagocytes to the white blood corpuscles for the reason that they fulfilled, as he contended, the function of taking up and digesting in their bodies the microörganisms. If the phagocytes succeed in overcoming the intruders—the microörganisms—the disease terminates benignly. The chances of the combat are, however, determined by the number and energy of the combatants. Further investigations have shown, however, that the blood serum and the cell free tissue juices possessed independent anti-bacterial properties. BUCHNER believes that the substances on the presence of which this action is based, are albuminoids. He applied to this new category of albuminoid bodies, which serve to protect the organism against bacterial invasion, the name of "alexins," or protective substances, which comprise the sozins, and phylaxins of HANKIN. HANKIN applies the name of sozins to the protective albuminoids occurring in the normal animal, and by the term phylaxins he refers to those occurring in animals which have acquired immunity through artificial treatment. VAUGHAN and MCCLINTOCK in their recent treatise on the nature of the germ-destroying constituents of the blood serum have proved that the germicide substance in the blood serum (the "serum alexins" of BUCHNER) must belong to the nucleins and not to the albuminates. By precipitating fresh blood serum with alcohol-ether, digesting the precipitate with pepsin in a hydrochloric acid solution, and finally dissolving the undigested residue in a weak solution of caustic potash, these investigators succeeded in obtaining a liquid which possessed the property of destroying various species of bacteria distributed or sprinkled over a given surface. Accordingly the bactericide substance of the blood cannot be an albuminoid. We know that the albuminoids are transformed into soluble peptones by pepsin and hydrochloric acid; but nuclein withstands this digestive process. Aside from the bactericide solution of nuclein from blood serum, VAUGHAN has obtained similar nuclein solutions from yeast, testes, thyroid gland, spleen, thymus gland, et cetera, and in each case the product obtained demonstrated its bactericidal potency. With respect to the derivation or origin of the nuclein present in the blood serum, it was experimentally proved by **Vaughan**, as well as by **Hankin**, that it must be derived from the leucocytes. The more recent investigations of **Buchner** confirm this statement in a somewhat striking manner. **Buchner** obtained by the injection of sterilized emulsions of wheat gluten into the pleural cavity of rabbits and dogs exudates which were rich in leucocytes, free from bacteria, and possessing more powerful bactericide properties than the blood and serum of the same animal. That only a secondary role is to be ascribed to phagocytosis in the sense of **Metschnikoff**, is shown by the fact that by freezing and then in turn thawing the exudate, the phagocytes may be readily excluded. On freezing the bactericidal alexins (nucleins) remain unmodified, whereas the leucocytes are destroyed. Inasmuch now as the exudates, first frozen and then thawed, exert quite as pronounced, or even a more pronounced, bactericidal potency than the unmodified, **Buchner** arrived at the conclusion that the bactericidal action is to be attributed to the substances held in solution—which are indeed derived from the phagocytes.

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*Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

What do we mean by nucleins?

The nucleins form the chief chemical constituents of the living parts of the cells, by virtue of which the cells grow, develop and reproduce themselves. The number of species of nucleins therefore, is limited only by the varieties of the cells. The nuclein of the yeast cell is not identical with that of the spleen, or thymus gland. Chemically the nucleins are complex proteid substances, characterized by the large amount of phosphorus which they contain. The phosphorus exists in the form of nucleinic acid, which is combined with a highly complex basic substance yielding as decomposition products one or more of the so-called xanthin bases. The nucleins are insoluble in alcohol and water but readily soluble in dilute alkalies. It would lead me too far if I were to expatiate on the chemical constitution of the nucleins, a domain of investigation in which **Professor Kossell** has rendered a great service. It is fitting, however, that I refer to the interesting labors of **Horbaczewski**, which have shed light on the relations of nuclein to uric acid. Hitherto uric acid has been regarded as the incomplete, and the urea as the complete, combustion product of nitrogen. From the close chemical affinity of uric acid to xanthin **Horbaczewski** now concludes that uric acid is to be regarded as a metabolic product of nuclein. And indeed we find wherever there is abnormal leucocytosis it is accompanied by a more profuse excretion of uric acid. In children, for example, in whom the number of nucleated cells is comparatively greater than in adults, we find the amount of uric acid correspondingly greater.

But after this short diversion I return to my theme. After **Vaughan** had found that the nucleins possessed bactericidal properties, it was natural for him to inquire whether the nucleins could not be therapeutically employed: perhaps they might be utilized to prevent or arrest the growth of germs in the animal body. These investigations have shown that rabbits and guinea pigs can be protected against virulent cultures of diplococcus pneumoniæ by previous treatment with hypodermic injections of a solution of yeast nuclein. The action of the nuclein, however, in imparting immunity from the effects of pneumonia germs does not seem to be due to the direct germicidal effect of the nuclein. The latter, although a product obtained by the dissolution of leucocytes provokes, when administered hypodermatically, as **Vaughan** has demonstrated, leucocytosis. The value of nuclein in therapy is in all probability therefore due to its effecting an increase in the entire number of white blood corpuscles, which, as we have seen, exercise a very important function in the natural protection of the organism against bacterial invasion. In other cases, however, such as membranous tonsillitis and streptococcus diphtheria, in which VAUGHAN has also employed nuclein with benefit, the effect must be ascribed to its direct germicidal action.

As I have stated, the nucleins are distinguished by their ready solubility in dilute alkalies, justifying the conclusion that the alkalinity of the blood may bear a very close relation to the secretion of nuclein by the leucocytes, and which latter we must now regard as the vehicles of the bactericidal substances. VON FODOR has recently demonstrated that the organism reacts against certain pathogenic influences, with very rapid increase in the content of alkali in the blood serum, this reaction being followed by a more or less pronounced decrease thereof. If the infection be terminated by a fatal ending of the disease, the decrease in alkalinity is considerable and progressive; but if the termination be not fatal, this effect is expressed in a less pronounced reduction of alkalinity. VON FODOR believes that animals, the alkalinity of whose blood is pronounced, or in which this alkalinity is energetically augmented after invasion, are in general capable of a greater resistance to the effects of bacterial invasion. The great alkalinity of the blood and the capacity of the organism to react from the infection by an energetic increase of alkalinity, would accordingly seem to exert a noticeable influence on immunity and on the susceptibility of the individual to infectuous diseases. A Russian investigator also, POEHL, ascribes an important role to the alkalinity of the blood in his theory of immunity. POEHL states that when microörganisms gain access to the body, leucocytosis is brought into play. If leucocytosis proceeds in an alkaline medium, soluble spermin is formed, which restores to the animal the respiration of the tissues, that is, the oxidation process which is going on in the organs, and a greater capacity for resisting pathogenic microörganisms is imparted to the system. POEHL's spermin is produced by the dissolution of the neuclein-bearing white blood corpuscles. Dispensing now with the term "spermin" and employing in its place the substance recognized by POEHL to be the parent or source of spermin—nuclein—we find a complete harmony between the views of VAUGHAN, POEHL and BUCHNER with respect to natural immunity: views which are based on the bactericide potency of certain soluble constituents of the blood of tissue juices. These soluble constituents are the so-called alexins or nucleins.

These properties of the blood, by virtue of which it is capable of combating the development of bacteria and also of exerting bactericide action, cannot, however, be regarded as the only means at the command of the living organism for defense against the deleterious influence of pathogenic bacteria. Further resources for the struggle must be furnished, which need have no direct influence on the microörganisms, and which ar ecapable of so modifying the poisonous substances or toxins produced by such microörganisms as to render them innocuous. BREIGER has shown us that the living disease-producer exerts its pathogenic action through the production of poison, and ROUX and YERSIN were the first to demonstrate that the broth in which diphtheria bacilli had been cultivated contained a very concentrated poison. KITASATO and BRIEGER proved that injection into the animal body of pure tetanus toxins obtained in artificial cultures produced symptoms identical with those induced when the tetanus bacteria themselves were introduced into the experimental animal and allowed to grow and multiply therein. These specific poison substances, which the pathogenic bacteria secrete during their growth and multiplication, are called "toxins." These poisons differ from one another in accordance with the species of pathogenic bacteria: and the changes produced in the animal body by different microbes are due to these toxins. BEHRING accordingly classifies the disinfecting properties, whose presence in the blood may be demonstrated, into:

(1) Anti-bacterial properties: in other words those inimical to bacteria and their propagation.

(2) Properties capable of destroying or enfeebling bacterial poison: in other words, antitoxic properties.

When BEHRING, in common with KITASATO, showed the enormous capacity possessed by the blood of rabbits which are rendered immune to tatanus, for destroying the poison introduced into the organism, the thought was at once suggested to BEHRING that it would be well to test the therapeutic value of such blood as applied to other animals susceptible to tetanus; and the result surpassed his most sanguine expectations. It was shown beyond question that the cause of acquired tetanus immunity is to be sought in the soluble constituents of the blood, especially as the same results could be obtained without the serum. The inevitable inference was that the blood must contain something which was not present before, and this something must be an antitoxin. Conceding the correctness of this hypothesis and bearing in mind that the antitoxin is first formed in the blood as a result of introducing bacterial poison or toxin, the specific curative substance in all its activity and potency must be present in the blood of every individual who has survived an infectious disease. Proceeding from this view-point, BEHRING endeavored to obtain an antitoxin in such potent form and abundant quality as to yield the means of healing the sick and protecting the exposed; and it is the great merit of BEHRING that he first conceived and executed the thought that blood-serum may be utilized in practical therapeutics.

Since now with the help of the living etiological factor we can produce a specific toxin, we are further enabled to infect a series of animals and to develop antitoxin in their blood. Thus far we are familiar only with the toxin of tetanus and diphtheria. All animals which are susceptible to either of these poisons may be utilized for inoculating with toxin. For the special purpose of obtaining the serum curative of diphtheria, BEHRING employed horses, cows, sheep and goats. The method of treating these animals for the purpose of obtaining the curative serum, although doubtless familiar to you, I shall take the liberty of briefly outlining.

The animals are first rendered immune to the disease by the prolonged injection of minute but gradually increasing quantities of diphtheria toxin. In order to obtain this toxin, flasks containing nutrient broth are inoculated with the bacilli and maintained for several weeks at a temperature of 37° centigrade. At the expiration of this period of incubation, the contents of the flasks are filtered through a CHAMBERLAND filter, which arrests the bacilli. The clear filtrate thus freed from the bacilli is a virulent poison: hence it is properly termed diphtheria toxin. This toxin is injected into animals in minute but increasing quantities, the initial dose being so small as to cause only transient symptoms. It is found that animals so treated are finally enabled to withstand the injection of such doses as would prove quickly fatal to an uninoculated animal of the same weight and size. When the animal has thus been rendered immune its blood-serum possesses the important property of protecting other animals from the disease. It is a noteworthy fact that the antitoxins are likewise present in the milk. The horse has proved to be the animal best suited to the purpose of antitoxin-production.

The theory of such animals as possess a natural immunity from a given infectious disease—as the rat, for example, with respect to anthrax—yield a blood with which other animals may be healed or immunized, has not proved true, and the incorrectness of this theory furnishes further proof that natural immunity must be referred to quite a different cause.

With respect to the chemical nature of the toxins and antitoxins we as yet know little. Toxins are by some regarded as enzymes and by others as tox-albuminoids. The antitoxins are regarded by **Roux** and **Pfeiffer** as products resulting from the activities of the living cell; and these products, they contend, are developed by the action of unknown substances or causes on such cells.

And what conception are we now to form of the physiological action of the antitoxins? The first theory advanced by **Behring** was a very natural and plausible one: The poison is simply destroyed. For the purpose of imparting immunity from pathological infection, substances are formed in the organism which destroy by "chemical" action the poisons produced by the bacteria. This theory is supported, first, by the fact, as **Behring** claims, that in the test-tube we may readily demonstrate the destruction of the poison by mixing the serum and toxin. A further proof is afforded in the quantitative relations existing between toxin and serum, inasmuch as correspondingly larger quantities of serum are injected in order to impart immunity from a more virulent intoxication. Now if we assume that the poison is destroyed by chemical combination, we find it difficult to explain why the quantities of serum, necessary to suppress or quench the toxic process, fluctuate so greatly, according as they are injected before or after infection. **Buchner** has now proved indubitably that no chemical union takes place—no destructive action—on mixing the poison and the counter-poison. **Buchner** combined the toxin and the antitoxin, producing both in solid form with a sodium-ammonium sulphate, the toxin from a filtrate of tetanus culture and the antitoxin from the serum of immunized animals: and when the mixture was administered, even in tolerably large quantities, the majority of the mice receiving the injections exhibited no reaction. On injecting the same quantity into guinea pigs, which weigh about twenty times as much as the mice, the guinea pigs succumed, while manifesting symptoms of tetanus. The proper conclusion is that the poison was not destroyed, inasmuch as, if it had been, a fatal issue, could not have followed the injections made into the guinea pigs. I must add that the guinea pig is far more susceptible to the tetanus poison than the mouse; on the other hand the mouse is a far lighter animal, and small doses of toxin which are harmless to a guinea pig are capable of killing white mice. For these reasons, namely, that antitoxin does not possess poison-destroying properties, but only immunizing power, **Buchner** concludes that the antitoxins are bacterial products—constituents of the specific bacterial plasma, inasmuch as all experiments made since the beginning of **Pasteur**'s researches into immunization have taught that the latter is accomplished by specific cell-substances. According to **Buchner**, the antitoxin exists side by side with the toxin in the original culture, and in the process of immunizing the animal he claims that nothing more is accomplished than a separation of the protective and poisonous substances of the bacterial cultures. For this reason **Buchner** also considers it probable that we shall presently be able to obtain antitoxin directly from the cultures, without the intervention of the animal organism. According to the more recent investigations of **Sabritschewsky** respecting the role of leucocytosis in diphtheritic infection the diphtheria toxin possesses the power of inducing necrosis: it is capable of assailing the cells and suppressing the phagocytic function. The curative serum, however, renders the cells of the organism less sensitive to the necrotizing action of the toxin.

As I have previously stated, we have thus far succeeded in producing only two antitoxins, a tetanus and a diphtheria antitoxin. In its practical bearings, the latter possesses one advantage over the former, inasmuch as it may be administered at a time when the toxins have not yet gained access to the entire organism. The development of pseudo-membranes in the larynx renders possible an early diagnosis. With tetanus, however, the general or constitutional convulsions are the first symptoms of the disease, but they unfortunately are likewise the expression of a profound constitutional infection. For these reasons the treatment of diphtheria affords chances which are more favorable from the very outset. Even on theoretical grounds, the antitoxin will be all the more efficacious the sooner it is administered, since so much less toxin or poison will have already penetrated the organism.

The great value of **Behring**'s sero-therapy does not, however, consist in the curative action of the antitoxin so much as in its defensive virtue. The protection from poisoning afforded by antitoxin possesses an advantage over any similar protection imparted by modifying or attenuating the bacterial products (for example, vaccination against small-pox) in that the inoculation proceeds without any pathological symptoms; and in that protection is instantaneously afforded. On the other hand, the duration of the protection afforded by the antitoxin is briefer.

At this point I deem it fitting to refer to the distinction between inoculation and vaccination. About a hundred years ago—in 1796—**Jenner** made the great discovery that artificial infection with cow-pox, a quite harmless disease, was capable of imparting protection or immunity from human small-pox. The conception of small-pox inoculation, on the other hand, was suggested by the fact that small-pox—and the same is true of most infectious diseases—rarely attacks the same person twice, and in the exceptional cases the second attack supervenes only after a long interval. It was accordingly concluded that an infectious disease so modifies the secretions of the invaded body as to render the latter an undesirable soil for the propogation of the disease-producer. The very weighty observation was further made that mere survival from mild attacks of such diseases was sufficient to afford protection from future invasion. The attempt was therefore made to produce by the inoculation of small quantities of the disease-product obtained from a case of true small-pox, a genuine but mild variola, thus creating immunity from the far graver disease acquired in the natural manner. But the subject protected by this method—by inoculation—became a menace to their uninoculated environment, and indeed contributed greatly to the dissemination of small-pox. It was only when JENNER introduced his method of vaccination with cow's lymph—the morbid product of cow-pox—that the first practical method of immunization was discovered.

Since we now know that the more active and potent the solution of diphtheria antitoxin employed, the more certain and prolonged is the protection thereby assured, it may be asked: What means have we for determining the strength of antitoxin? The standardization of antitoxin is effected by observing closely the results of physiological experiments. The first step is the administration of the lethal dose for the animal, such as a guinea pig of known weight, of a known solution, which has been prepared in sufficient quantity to form the standard for a large number of cases. The quantity of antitoxin which must be previously injected to protect the animal from the action of this lethal dose is then determined, and the ratio between the weight of antitoxin and the bodily weight of the animal furnishes means of representing in definite units the strength of the solution. Thus, a sample of antitoxin may be said to possess a strength of 50,000 normal units when an animal is protected against its minimum lethal dose of toxin by the injection of a quantity of the antitoxin equal to 1-50,000 of its bodily weight.

If this new diphtheria cure proves all that is claimed for it we may expect that in the near future other infectious diseases will prove amenable to the same system of treatment. But whatever may be the ultimate fate of this new treatment the reports thus far published attest, for by far the greater part, the virtue of BEHRING's sero-therapy. Medical science is progressing in the direction of obtaining immunity from disease. Despite the failure of tuberculin, these researches have never once swerved from the chosen path, and in that path they will unquestionably achieve further progress. Many dissenting opinions have been expressed with respect to the practical results accruing from bacteriological researches, but it cannot be disputed that from the bacteriological laboratories ideas have gone forth which have exerted a stimulating and fructifying influence on medical thought and practice.

TUMORS OF THE NECK.*

BY ERNEST T. TAPPEY, A. M., M. D., DETROIT, MICHIGAN.
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IN considering tumors of the neck we shall do well to turn our attention by way of preface to the broader subject of the causation of tumors in general.

The cause of tumors is still shrouded in great obscurity. The suggestion of COHNHEIM is perhaps as much in the minds of investigators as any other theory. "This," according to DELAFIELD and PRUDDEN, "is to the effect that all true tumors are due to faulty embryonal development; that certain embryonal cells of various kinds, in the course of the development of the body, are superfluous, or become displaced, or do not undergo the normal changes, and remain ready, when the conditions shall become favorable in later life, from whatever reason, to commence growing with all the potencies of embryonic and lowly organized cells in the midst of the mature tissues, not being restrained, however, by the regulating influences which determine the nature and relative extent of growth in normal development, they go on to the production of tumors, which represent, though in a typical form, the various tissues which the strayed or unused cells were destined normally to produce." This is called the hypothesis of the embryonal origin of tumors.

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* Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

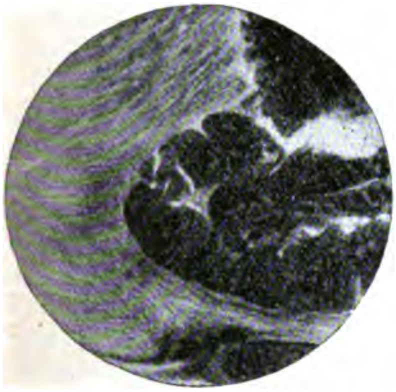
FIGURE NO. I. MAGNITUDE 66 DIAMETERS.

DELAFIELD and PRUDDEN suggest, however, that "it should be remembered, furthermore, that, under ordinary conditions in the body, certain cells which are destined to replace others which have fulfilled their destinies, as in the skin, possess to a greater or less degree the characters of embryonal cells, and that while in the struggle for existence the growth of these cells may be held in check, as by conditions of pressure, nutritive supply, et cetera, if these conditions be altered, these cells may undergo proliferative changes as significant as those of the alleged belated germs of COHNHEIM."

Bacteria have been ascribed by others as the cause of tumors, and they claim that the presence of bacteria in tumors is proof, but, as the authors above mentioned suggest, they may be only the cause of certain destructive changes which may take place in the tumor. VULPINS, of Heidelburg, reports in *Central-Blatt für Chirurgie* that D'ANNA has moreover made extensive experiments in the direction of determining the infectiousness of carcinoma, but though he used forty-nine carcinomata in making injections on dogs and rabbits, he did not have a single successful result.

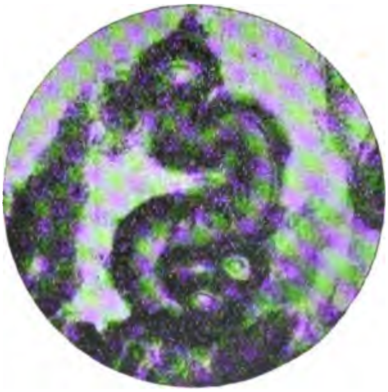
FIGURE NO. II. MAGNITUDE 40 DIAMETERS.

These reports go to show that though the prevailing opinion is that tumors are formed from cells of the same kind which produce normal tissues, and that the tumor is of one kind or another according to the kind of cell which goes to make it up, still what influences are at work which determine the formation of the pathological growth instead of its normal analogue, we are as yet unable to say. Why a group of cells, instead of forming normal fat to be deposited as is usual, should so arrange themselves as to form a lipoma; or why another group, instead of supplying the usual tissue metamorphosis of the parotid gland, for instance, should change that gland into a sarcoma, or why, instead of forming muscular tissue, other cells should form a myoma or fibro-myoma of the uterus, as yet is a mystery. In classifying these growths, **Delafield** and **Prudden** have adopted a system which seems reasonable and intelligible. It depends upon the fact that tumors are made up of cells like those which enter into the formation of normal tissues, as we have said above, and the classification is that of normal tissues.

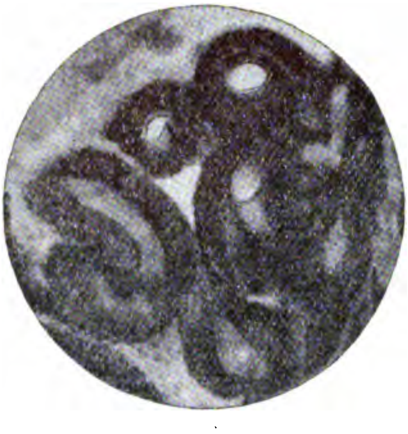
Figure No. III. Magnitude 80 Diameters.

In the small compass of the neck may be found examples of almost all, if not all, kinds of tumors. Though lymphatic glands, enlarged from various causes, are perhaps not properly classed as tumors, still we speak of them as such in this paper, and in the same way we speak of cysts in this connection, thinking of them as growths that require surgical treatment.

Perhaps the growths which are most frequently met with in the neck are the tuberculous lymphatic glands. These appear singly or in chains of two, three, or more, sometimes superficially, sometimes in the deeper structures. The deeper lymphatics, which become the seats of tuberculous inflammation, are oftentimes very difficult to remove, for they not only lie near important structures, but also they are very firmly adhered to contiguous parts. In separating them it is necessary to depend upon some blunt instrument, for example, a periosteal elevator, for a good deal of the work, using scissors where the tissues are too tough to tear through. These tuberculous glands are perhaps the most difficult growths to remove. They are more adherent because of their inflammatory nature. It is hard to say whether their removal is more difficult in the neck or in the groin. In each locality there are important structures which may be injured, particularly the carotid artery and jugular vein in one case, and the femoral artery and vein in the other. I was so unfortunate as to wound the common femoral artery in removing glands from the groin, and was obliged to ligate, which I did in two places, and divided the vessel between the ligatures. There was no disturbance afterwards except a considerable edema. The man, however, made a perfect recovery, and earns his livelihood by hard manual labor as a moulder. The jugular vein may easily be wounded. In a recent case in which I removed a sarcoma from the neck, the vein followed the tumor out at the external wound, but fortunately it was not

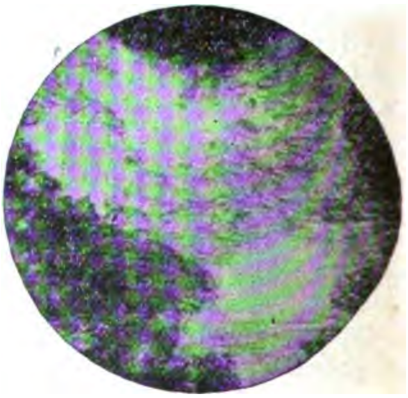
Figure No. IV. Magnitude 80 Diameters.

injured. Lipomata or fatty tumors appear in the neck as well as in other parts of the body, and, as a rule, are easily removed.

Carcinomata are also encountered, but more frequently than these we find sarcomata. VOLKMANN describes carcinomatous tumors deeply seated in the branchial region of the neck, and because there is no epithelial structure in that region except the branchial clefts, he has concluded that these are their origin, and has accordingly named them branchial carcinomata. I have had one instance of sarcoma involving the parotid gland. Of course, in its removal the facial nerve was divided, and the patient has been left with a one-sided facial paralysis. In another case the tumor lay on a line with the upper border of the larynx and under the sterno-mastoid muscle, projecting out from under it in front. This tumor has proved to be very interesting. DOCTOR F. MAASS has kindly made sections of it, and concludes that it was originally a lymphatic gland that degenerated into an angio-sarcoma. These sections I have photographed and reproduced as in Figures 1, 2, 3 and 4.

Number 1 shows a well marked line between normal connective tissue and the cell proliferation and resembles very much the structure of a carcinoma.

Number 2 is a beautiful picture, showing a blood-vessel and transverse sections of the same above and below, and the enormous proliferation of cells from the walls of the vessels.

Number 3 shows longitudinal and transverse sections of blood-vessels. The endothelial cells lining the vessels are unaltered. The enormous blood increase in round small cells from the outside of the walls is well shown.

Number 4 shows broken down gland tissue covering the greater part of the field and tumor cells on three sides. This section shows positively the lymphatic gland origin of the tumor.

Enlargements of the thyroid glad are common. Most common are the simple hypertrophies—these may become very large, weighing several pounds. This gland may become affected by carcinomatous and sarcomatous disease. It may be necessary to remove the growth, in whole or in part, either because of the great weight or because of pressure upon the trachea or esophagus. This generally is a very bloody operation and requires promptness and decision in removing it.

Those strange growths (cysts) containing sebaceous matter, teeth, hair, skin, bone, muscle and glands, are found not only in the pelves of women, probably their most common habitat, but according to DELAFIELD and PRUDDEN, are found as well at the lower end of the spine and about the head and neck. These are named teratomata, and are probably rare outside the female pelvis. Another form of cyst that is met with in the neck is the branchial cyst. It is a congenital formation; the branchial cleft does not close perfectly and later becomes distended with serum.

The last form of disease we shall speak of is actinomycosis. A parasite—the actinomyces—is lodged in the normal tissues. These take on an inflammatory action of low grade with formation of granulated tissue. These together form a considerable mass. This may break down and form an abscess. A common seat of this disease is the jaw—the tumor, or rather mass, gradually involving the neck. The disease has its origin in the ox. It is seen in man, but is a rare disease, especially in America. Its treatment is excision.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, FEBRUARY 18, 1895.

THE PRESIDENT, EUGENE SMITH, M. D., IN THE CHAIR.
REPORTED BY LUTHER S. HARVEY, M. D., SECRETARY.

EXHIBITION OF SPECIMENS.

DOCTOR McGRAW: I have here a leg which I amputated for an old trouble of the femur and knee-joint. Necrosis had been going on for a long time. Six weeks ago the man sprained his knee and was brought to the city and sent to the hospital. We find, you see, evidence of osteo-myelitis, an irregular formation of hard, bony tissue. In the joint we find a gelatinous degeneration and erosion of the cartilage. There is also an inflammatory condition of the tibia. If the man had been twenty instead of forty it might have been possible to save the leg. The sinus runs from the old focus to the center of the condyles.

DOCTOR HOYT: I was called to deliver MRS. S. I found her in labor at the full period. After delivering her of a normal child, I found this small fetus (about three inches long). It is nothing unusual except that the placenta was oblong, showing double circulation.

DISCUSSION OF PAPERS.

DOCTOR SCHWICKERATH read a paper entitled "The Protective Substances of Our Organisms."—(See page 107).

DOCTOR FLINTERMANN: After listening to the paper of DOCTOR SCHWICKERATH, who is an expert, it would be presumptious in me to attempt a discussion. DOCTOR SCHWICKERATH said that tuberculin has so far failed to succeed. The point of view from which this was used, was different. It was supposed to have a reactive effect. It cured in so far as it produced a kind of inflammation. Serum, in its effect, is purer where no pathological action has taken place. Before using the remedy, I would subject the patient to a careful examination of the organs. The height of the fever and the state of the nervous functions should receive consideration. The statement that antitoxin has caused renal trouble can only be proved by a comparison of the cases in which it has been used with those in which it has not.

DOCTOR JENNINGS: I feel myself in the same position as DOCTOR FLINTERMANN, in being hardly capable of discussing the paper. I have had no practical experience on the experimental side. In regard to the experimental side, my experience has not yet been wide enough to be of much value. The reduction of mortality from sixty per cent. to twenty-three or twenty-four per cent. is a great advance. It is impossible to get the mortality rate because we cannot tell what per cent. of the reported cases are genuine diphtheria. Fifty-eight per cent. of the cases reported in New York proved to be KLEBS–LOEFFLER. The first case in which I employed antitoxin seemed to be true diphtheria, and looked as though it might be a serious case. I was well enough satisfied with the correctness of the diagnosis to use the remedy. I injected 400 units after the disease had progressed ten hours. The next morning the child had improved, the membrane disappeared, and the child went on to a rapid recovery. In another case I found the child suffering from laryngeal diphtheria and intubated. I did not expect it to live more than twenty-four to forty-eight hours. The temperature was 104° and remained so. The remedy had no effect on the course of the disease, except, perhaps, that the child lived three or four days longer than it otherwise would have done. We must be careful what serum we use. Factories will spring up in all parts of the country, and the market will be flooded with various antitoxins of indifferent quality. The State Board of Health should protect us in this matter. I would not use any antitoxin except that made by BEHRING.

DOCTOR LONGYEAR: There is just one point mentioned by DOCTOR JENNINGS that I wish to remark upon, and that is the importance of getting a fluid that is reliable. We are liable to have the same trouble we have had with vaccine points. In this matter, however, it is still more important that we obtain goods that may be relied upon. Life may depend on the purity of the injecting fluid. The state should take up the question of both serum and vaccine.

STATED MEETING, FEBRUARY 25, 1895.

THE PRESIDENT, EUGENE SMITH, M. D., IN THE CHAIR.
REPORTED BY LUTHER S. HARVEY, M. D., SECRETARY.

EXHIBITION OF PATHOLOGICAL SPECIMENS.

DOCTOR LONGYEAR: I exhibit here the product of an ectopic pregnancy with report of the case, that it may be of service to the general practitioner in enabling him to make early diagnosis in these cases. The patient was thirty-nine years old, the mother of two children, and had had four miscarriages. The last pregnancy was eight months ago. Last October she became pregnant and supposed she had miscarried. Sometime in December she was taken with a sharp pain in her left side and fainted. This occurred again and again. She was up and about a good deal of the time. Last Friday, DOCTOR F. L. NEWMAN was called and diagnosed ectopic pregnancy. I operated Saturday morning. The pulse was 120 and the temperature 100°. The abdomen was distended. I first examined the uterus and removed the decidual membrane with the forceps. The os was patulous, and the finger could be introduced without difficulty. Upon incision the peritoneum was found to be black and the abdomen was filled with blood. The patient was placed in the Trendelenberg position and the mass removed. The abdomen was flooded with water. The clots were organized and attached to the omentum. The cavity was quickly dried out and the abdomen sewed up. The pulse was very low. Transfusion was applied and the pulse came up for three hours. Then the heart stopped. Practitioners should diagnose these cases early. The woman's life could easily have been saved if she had been operated upon early.

DOCTOR TAPPEY: I have here the greater part of the greater omentum as a trophy of successful operation for strangulated hernia. Reduction had been tried. I found it to be congenital hernia. The sac was continuous with the tunica vaginalis. The sac contained about six inches of intestine that had been strangulated about six hours. The intestine was somewhat dark in appearance, but was in good enough condition to be returned to the abdominal cavity. The omentum was adherent at one point. I removed all of the omentum that could be removed, and closed up the wound according to PIERCE's (THIERSCH's)? method. That evening the temperature went up to 103°, and there was some pain from flatus. Salts were administered and the temperature came down. The patient made a satisfactory recovery.

REPORTS OF CASES.

DOCTOR MAASS: Several weeks age two cases came under my observation concerning the advisability of tracheotomy. First I was called by DOCTOR BREADFORD to operate on a child suffering from diphtheria. As we entered the room we heard the remark—It is too late; it is gone! The child's face was pale without any color. The breathing had ceased. Only the mouth was opened a little from time to time as in agony. I performed the tracheotomy as soon as possible without previous antiseptic measures. The trachea was found to be filled with muco-purulent matter and pieces of membrane, which I removed with this instrument. Afterward I made compression of the thorax and the child began to breath again. I did not examine the condition of the heart before the operation, because there was no time to lose, but I think if there was any action it must have been very weak as there was entire absence of any bleeding during my operation. The following three weeks the urine showed a considerable quantity of albumin, which wholly disappeared under the very careful attendance of DOCTOR BREADFORD, who also, several times, day and night, removed the dangerous obstructions of the canula. It is now about eight weeks since the operation was performed and the child has completely recovered. The other case occurred in DOCTOR IMRIE's practice. A lady about fifty years of age fell upon her doorstep and broke her larynx. When I saw the patient about four hours after the accident, there was no immediate danger. But the breathing was difficult and the difficulty, as DOCTOR IMRIE told me, increasing, I agreed to perform a tracheotomy and did so at once. The next morning I was called again and found the woman sufficating. I removed the canula and afterward the lump which you see here with the same abovementioned instrument. The breathing was then easy and I then closed the wound with a tampon to ascertain the condition of the larynx. Not a bit of air passed through. The following five or six days—every day twice—the attacks of suffocation would come on. About the tenth day after operation the canula was removed. The wound is now closed. The woman is hoarse, but the hoarseness is decreasing.

GRAND RAPIDS ACADEMY OF MEDICINE.

STATED MEETING, FEBRUARY 18, 1895.

THE PRESIDENT, SAMUEL R. WOOSTER, M. D., IN THE CHAIR.
REPORTED BY ROBERT C. DUNDASS, M. D., SECRETARY.

READING OF PAPERS.

DOCTOR COLLINS H. JOHNSTON read a paper entitled "The Sterilization of Catgut," the following being an abstract thereof:

Sterile catgut is an ideal material for ligatures and sutures in gynecological surgery. Silk, silver wire and silkworm-gut should be used as little as possible, as they often act as foreign bodies and excite exudates which are of low vitality and which form a favorable medium for the growth of pyogenic cocci. **Martin**, **Zweifel**, **Olshausen**, **Döderlein**, and others in Germany, and some men in our own country, rarely use anything but catgut in the abdominal cavity, and the very reason why catgut is not thus employed by all abdominal surgeons is the difficulty of rendering it absolutely sterile. About two years ago one of the largest gynecological clinics in America lost four patients in one week from septic peritonitis due to infected catgut, and another death from the same source occurred while I was visiting the clinic last September.

Catgut is sometimes the seat of very resistant bacteria, such as anthrax bacilli, staphylococci, and a bacillus whose spores are many times more resistant than anthrax spores.

Both chemical and thermic methods of sterilization have been employed. The former is uncertain in its results, and bichloride of mercury, which is most used, produces a superficial necrosis in wounds and thus favors suppuration. Asepsis, rather than antiseptics, should be our aim, and experience has shown that moist heat is our best germicide. But catgut cannot be boiled in water without injury, so it is frequently boiled in alcohol. Absolute alcohol boils at 78.4° centigrade, which is insufficient to destroy the resistant spores found in the gut. Boiling the spores of the catgut bacillus in xylol for several hours at a temperature of 140° centigrade does not destroy them.

Krönig, an assistant of **Paul Zweifel**, of Leipsic, therefore boils it one hour in cumol, whose boiling point is 170° centigrade. The gut is then *always* sterile. It must, however, first be thoroughly dehydrated by drying in an oven two hours at a temperature of 70° centigrade. Care must be taken that the temperature of the incubator is slowly raised to the desired degree of heat, or the gut is made brittle. When taken from the cumol it is placed in petroleum benzine to remove the cumol. It can remain permanently in the benzine, or be kept in sterile petri dishes, or in absolute alcohol.

STATED MEETING, MARCH 4, 1895.

THE PRESIDENT, SAMUEL R. WOOSTER, M. D., IN THE CHAIR.
REPORTED BY ROBERT C. DUNDASS, M. D., SECRETARY.

DISCUSSION OF PAPERS.

The discussion on **Doctor C. H. Johnston's** paper—"The Sterilization of Catgut"—read at the previous meeting was opened by—

Doctor Perry Schurtz: I have employed cumol catgut, as prepared by **Doctor Johnston**, very extensively in the abdomen and elsewhere, since September, 1894, and have had no suppuration from its use. It is not brittle, but will stand much force. I prefer it to the commercial article which is not reliable.

Doctor Boise and **Doctor Graves** both said they had used it but little, but were highly pleased with it. No suppuration.

Doctor Johnston: The method of sterilizing catgut with the ethereal solution of bichloride had been proven worthless. Experiments had shown that cumol catgut was thoroughly aseptic.

REPORTS OF CASES.

Doctor Perry Schurtz reported a case of tubal pregnancy. A lady, married, having missed two or three periods was taken with severe pains in the abdomen. Two weeks later she had a second similar attack, and in another month had a third attack, when I was called to see her. I found her in a state of exhaustion and collapse. Pulse 140; temperature 101½°. Enlargement of the abdomen extended to the umbilicus. The uterus had been pushed to the left and the mass in the abdomen was immovable. On opening the abdomen I found a large mass the size of a cocoanut. The intestines were adherent all around. I passed a trocar and evacuated three pints of muddy colored blood. The mass was enucleated. The intestinal walls were as thin as paper, soft, and were torn in manipulating. I removed seven inches of gut and made end-to-end approximation with a Murphy button. On the sixth day the patient had sharp pains in the right side, probably due to the button passing the cecum. The button passed from the anus on the sixteenth day. Patient made prompt recovery.

Doctor Graves reported a case of hematocele from rupture of extrauterine fetation into abdominal cavity. One year ago the woman, having missed one or two periods, was taken with a severe pain in the abdomen, followed by collapse and rapid pulse. Nothing was done and she gradually grew better. One month ago she had a second attack, followed by collapse and rapid pulse, and I was called to see her. On digital examination I found a dense mass the size of a small cocoanut in Douglas' pouch. I passed an aspirating needle into it through the vagina and evacuated blood. I then made an opening with a knife and washed out many dark clots, probably the product of the last hemorrhage. The product of the hemorrhage of a year ago was firmly adherent. I made a counter opening and inserted my metallic horseshoe drainage tube. Two weeks later sepsis set in and the patient died. I believe that all cases of unruptured extrauterine fetation and all masses capable of enucleation should be approached through the abdominal cavity.

STATED MEETING, MARCH 18, 1895.

The President, SAMUEL R. WOOSTER, M. D., in the Chair.
Reported by ROBERT C. DUNDASS, M. D., Secretary.

REPORTS OF CASES.

Doctor G. K. Johnson briefly mentioned three cases of extrauterine fetation that recovered after evacuating, bones of fetus, per rectum. He then reported a case as follows: A lady, twenty-two years of age, primipara, was taken in labor November 15, 1894, at 3 A. M. At 9 P. M. the attending physician made a forceps delivery, and, according to the nurse, used a great deal of force. He immediately after delivered the placenta by making traction on the cord. The woman promptly flooded. On the following day she flooded several times and was apparently collapsed. She was very ill for two or three weeks when I was called to see her. I made a vaginal examination and found a complete inversion of the uterus, the fundus of which was about one inch from the labia. Many attempts, during the next three months, were made at reduction, but all were unsuccessful. The patient recovered, but still has inverted uterus. She menstruates regularly, although somewhat profusely.

DOCTOR RUTHERFORD said she had a similar case in which the menstruation was normal, but the uterus was completely inverted.

DOCTOR WATSON: I saw a case of complete inversion of the uterus eighteen years ago. The woman is still living, her uterus is still inverted, and she menstruates regularly and is practically well.

DOCTOR S. C. GRAVES reported a case of masturbation in a child, female, six years of age. He said: The family history in this case is practically negative. I questioned the father and mother very closely and found that they were both but normally passionate. The grandfather was an inebriate. The child is well developed physically and has a plump appearance. There is some redness about the meatus urinarius, probably the result of external irritation. Otherwise the examination revealed no evidence of peripheral irritation and no abnormality. The child seems to desire the presence of boys, but cares nothing for the society of girls. If her hands are fettered she will complete the act by rubbing against corners of chairs and other pieces of furniture and has an ejaculation of fluid each time. I amputated the clitoris but the patient was not benefited.

DOCTOR EUGENE BOISE: I had a case of nymphomania in a young woman. The usual remedial agents were tried with negative result. I finally dilated and curetted the uterus and made section of both pudic nerves. The patient was entirely changed.

DOCTOR HENRY HULST: Masturbation may exist without central or peripheral irritation. It may be psychological. Removal of ovaries will not always cure. Hypnotism is a good method of treatment. I treated a case some time ago with good result. The patient was aware of the fact that she was a nymphomaniac but was able to control herself. It required great effort and made her miserable, and finally undermined her whole nervous system so that she became emotional, hysterical, thought of suicide, and in fact was a complete wreck. She had been treated homeopathically without effect. Upon examination I could find no peripheral cause, and there apparently was no centric irritation. I stopped all medicine and tried hypnotism. After the first sitting the nymphomania had entirely disappeared but the nervous derangement required longer treatment, although it was materially benefited. After a few more treatments with hypnotism she was cured.

EDITORIAL ARTICLES.

THE NEW HEALTH BOARD.

THE new health board is now in charge of the sanitary fortunes of the city of Detroit. The nominees of the Governor are men of high character, and unquestioned ability, and will command the respect of and coöperation of the profession and people at large.

One of the first acts of the new board has been to reinstate **DOCTOR S. P. DUFFIELD** as Health Officer. This act has been in every way a wise and commendable one. **DOCTOR DUFFIELD** long ago won the confidence and respect of the profession. He was removed, not for incapacity, but for reasons of political exigency. The same act of the legislature by which his successor was appointed, has in turn become the instrument whereby he has replaced him. The active interest **Doctor Duffield** has displayed in all professional affairs will secure for him at all times the advice and assistance of his professional brethren in carrying out the sanitary requirements of his office.

The appointments made by the new board are also admirable. The appointees are all men of character and attainment. They have been selected without regard to political faith or party, thus giving assurance that the new board will purge the health department of its deepest and deadliest stain, that of being a bureau of elections. We look to the new board for an exemplification of the possibilities of municipal reform. In the conduct of their department, by purely business methods, they will be able to prove by the appreciation that will sustain them, that the American people are not any fonder of corrupt government than the people of any other nation; and are very willing to support a good thing when it is demonstrated to be such.

EDITORIAL BREVITIES.

SUPPRESSED SMALL-POX CASES.

In our last issue certain remarks were made regarding "suppressed" cases of small-pox, the inference being that the late health board had suppressed the reports of certain cases of small-pox under the designation of chicken-pox. **Doctor McLeod**, the ex-health officer, has called our attention to these remarks, and objects to the charge of "suppression," maintaining that in these cases he simply accepted the mistaken diagnoses of his collaborateurs. It is far from our intention to impute unworthy motives falsely, and we gladly give **Doctor McLeod** the satisfaction of calling these cases "mistaken diagnoses." The events which led to the correction of these "mistaken diagnoses" we still maintain to have been the *coup de grace* which finished the career of the old health board. Criminal negligence is undoubtedly a less desirable attribute than culpable carelessness, and the old board may have what satisfaction it can derive from dying under the latter imputation instead of under the former.

THE REMOVAL OF THE TESTES AS A CURE FOR HYPERTHOPHY OF THE PROSTATE.

Now that removal of the testes is likely to become a recognized surgical procedure of merit, some discussion has arisen as to the priority of its suggestion. The profession is doubtless indebted to **Doctor J. W. White**, of Philadelphia, for this operation. The serious consideration of the removal of the testes dates from his article of June, 1893, on "The Present Position of the Surgery of the Hypertrophic Prostate," read before the American Surgical Association. The operation has not yet been found to be a popular one, but the recognized influence of the removal of the testicles on the prostate of the lower animals argues well for its adoption.

A NEW USE FOR TUBERCULIN.

From Vienna comes the intelligence that **Professor Wagner** is treating insanity by inoculations of tuberculin. The treatment is said to be meeting with success. Experience hitherto has not demonstrated the induction of substitution diseases to have been of any benefit.

TETANUS ANTITOXIN.

The antitoxin treatment of tetanus seems likely to be as successful as that of diphtheria. Experimentally the effects of the antitoxin are little short of marvelous. Minute doses injected into animals completely neutralize fatal doses of tetanus toxin injected eight or ten hours afterward. The antitoxin also seems to possess curative powers, but much larger doses are necessary, when the disease has declared itself, than when the substance is used only as an immunizing substance. Immunization is likely to be the key-note of modern medical progress, and doubtless new triumphs are in view.

THE DISCOVERY OF ARGON.

That the common atmosphere should in these latter days have been found to contain an element that has hitherto escaped discovery is a fact that appears almost incredible. The final discovery of the element by **Ramsey** and **Rayenleigh** is, however, an approved fact. The new element is obtained by forcing the air, from which carbonic acid and water have been removed, from oxygen by means of red-hot copper. The nitrogen is removed by heating metallic magnesium to redness. The residual gas is argon. The physical properties of the new element have been pretty fully determined, and it yet remains for the physiologist to determine its actual rôle in the processes of organic life. That it is found in the atmosphere is indicative of the close relation it must bear to organized life.

RACIAL ELEMENTS IN DISEASE.

The city of New York has been a particularly favorable point for the study of racial characteristics. In 1890 the city contained 335,000 white persons whose mothers were born in America, 400,000 whose mothers were born in Germany, 400,000 whose mothers were born in Ireland, 120,000 Russian and Polish Jews, besides large representations of other nationalities. Certain valuable conclusions in regard to the racial element in disease have been drawn from these statistical data. The colored race is shorter-lived than the white, has a high infantile death-rate, is very liable to tuberculosis and pneumonia, and is less liable than the white race to malaria, yellow-fever, and cancer. The Irish race brings forth hardy children, but has a high death-rate in adults from pneumonia, tuberculosis and alcoholism. The Germans are especially liable to disorders of digestion and cancer. The Jews have a low death-rate and a more than average longevity. Diseases of the nervous system are their chief sources of trouble.

MEDICAL NEWS.

THE AMERICAN MEDICAL ASSOCIATION MEETING.

The following information in regard to the forthcoming meeting to be held in Baltimore has been announced by the chairman of the committee of arrangements: The railroad fares will be one and one-third on all roads. There will be excursions at popular prices to Gettysburg Battlefield, Annapolis, Washington, and probably Philadelphia and New York. A large attendance is expected. There will be a reception at the Johns Hopkins Hospital and a general reception by the profession of Baltimore to the Association delegates and their families at the Music Hall. An auxiliary committee of ladies will be appointed to look after the entertainment of the visiting ladies. The Cyclorama building has been obtained for the pharmaceutical exhibition and intending exhibitors are requested to make early application for space to Doctor B. T. Winchester, manager of the exhibition, 716 Fremont avenue, corner of Lanvale street, Baltimore, Maryland. Diagrams and rates will be furnished on application. The hotels have all made a reasonable reduction and exact rates will be announced later. The hotel Stafford will be the headquarters of the Association. The sessions will be held on Tuesday, Wednesday, Thursday and Friday, May 7, 8, 9 and 10, 1895.

THE DETROIT HEALTH COMMISSIONERS.

GOVERNOR RICH has appointed Doctor Howard W. Longyear, Doctor Oscar LeSeure, Mr. E. C. Van Husan and Mr. H. P. Davock, Health Commissioners of the city of Detroit. Doctor Longyear has been appointed for four years. He is a graduate of the College of Physicians and Surgeons of New York City, and is a physician of eminence. Doctor LeSeure's tenure of office is for three years. He received his medical degree at the Homeopathic Medical College of the University of Michigan, and afterward graduated from Bellevue Hospital Medical College. He has achieved prominence as a Homeopathic physician. Mr. Van Husan will serve on the Commission two years. He is a business man of hustling propensities. Mr. Davock is the one-year incumbent, and in consequence has been honored with the presidency of the board. He is a well-known attorney. The Commission have appointed Doctor Samuel P. Duffield, Health Officer. All of which appointments are particularly satisfactory to the citizens of Detroit.

THE PREVENTIVE TREATMENT OF HYDROPHOBIA.

SINCE its inauguration July 2, 1890, the Pasteur Institute, of Chicago, has treated 336 persons, the number for each year being as follows:

From July 2 to December 31, 1890,	37
From January 1 to December 31, 1891,	62
From January 1 to December 31, 1892,	101
From January 1 to December 31, 1893,	107
From January 1 to December 31, 1894,	59.—366

The persons treated came from the following states: two hundred and six from Illinois, thirty-nine from Iowa, twenty-six from Indiana, twenty-five from Kansas, twenty-three from Ohio, ten from Arizona, six from Missouri, four from Minnesota, four from Michigan, four from Louisiana, three from Tennessee, three from Kentucky, three from Texas, one from Wisconsin, two from South Dakota, three from Indian Territory, two from Nebraska, one from New Mexico and one from Oklahoma Territory. There were three hundred and forty-one persons bitten by dogs, nine by horses, seven by cats, five by skunks, two by wolves, one by a mule, and one by a pig. There were one hundred and ninety-five persons who received severe and multiple bites on the hands and wrists, forty-seven on the head and face, forty-seven on the arms and shoulders and seventy-seven on the legs and thighs. Following the rôle of Pasteur the patients treated have been classified into three categories: (1) Persons bitten by animals recognized and ascertained to be rabid by the control experiment made in the laboratory or by the death of other persons or animals bitten by the same animal. Of this category one hundred and twenty-three were treated. (2)

Persons bitten by animals recognized to be be rabid by the symptoms of the disease shown during life. Of this category one hundred and sixty were treated. (3) Persons bitten by animals strongly suspected to be rabid. Of this category eighty-three were treated. The mortality of persons bitten by rabid animals, prior to the discovery of the Pasteur antirabic treatment, was as follows: Eighty-eight per cent. for the bites of head and face, sixty-seven per cent. for the bites of the hands, and twenty to thirty per cent. for the bites of the limbs and trunk. The results attained at this institute are gratifying, only two deaths having been reported out of the three hundred and sixty-six patients treated; thus giving a mortality of fifty-four hundredths per cent. Besides the above, three hundred and seventy-two other persons applied for treatment, but were sent back as it was recognized either by the control experiment, or by the history of the case, that the animal was not rabid; their wounds, however, were treated free of charge. The institute will thankfully acknowledge any assistance or donations from private individuals or institutions contributed for the relief of the poor.

THE BOARD OF HEALTH BILL.

A BILL to provide for the appointment of a State Board of Health Commissioners, to make necessary appropriations therefor, and to repeal act number eighty-one of the public acts of 1873, entitled "An act to establish a State Board of Health, and to provide for the appointment of a superintendent of vital statistics, and to assign certain duties to the local boards of health," being sections 1625 to section 1632, inclusive, of Howell's annotated statutes, and to repeal all acts and parts of acts inconsistent with the provisions of this act.

Section 1.—The People of the State of Michigan enact, That within thirty days after this act shall take effect, the Governor, with the consent of the Senate, if it be then in session, shall appoint seven persons, six of whom shall be physicians of good moral character, and distinguished for their devotion to the study of medicine and sanitary science, and of not less than five years' continuous practice in their profession, and each of whom shall be a graduate of a legally authorized medical college, and one of whom shall be a resident of the Upper Peninsula, and five shall be residents of different sections of the Lower Peninsula, so that all part of the State shall be represented as nearly as may be. The Governor shall also appoint one person of good moral character and business qualifications, who is not a physician, who shall serve until January 31, 1901. And said seven persons when so appointed, shall be known as "The Michigan State Board of Health Commissioners." Two of said physicians shall be appointed for two years, two for four years and two for six years. The six physicians first appointed shall be so designated by the Governor that the term of office of two shall expire on January 31, 1897; two on January 31, 1899, and two on January 31, 1901; and biennially hereafter, as the several terms of service of the seven persons so appointed shall expire, the Governor shall in the same manner appoint others of like character and qualifications, to hold their office for six years, and until their successors are appointed and qualified; but in no case shall said Board of Health Commissioners be composed of physicians of any one school of medicine. The Governor shall be a member ex-officio of said board.

Section 2.—Within twenty days after the appointment of the seven persons provided for in this act, they shall meet in the city of Lansing, and take and subscribe the oath prescribed by law for State officers, which oath shall be filed with the Secretary of State; and thereafter said board shall immediately organize by electing one of their number president. They shall also elect a secretary, and said secretary shall be the executive officer of the board, but not a member thereof. The secretary shall execute to the State of Michigan a bond in the sum of five thousand dollars, with sureties to be approved by the Governor; and when approved, it shall be filed in the office of the Secretary of State. Said bond shall be conditioned for the faithful performance of the duties of the office of the secretary of the State Board of Health Commissioners; he shall also take and file a like oath to that prescribed for members of the board. The board may elect one of its own number as secretary, in which case such member shall immediately resign as a member of the board, and the Governor, as soon as may be, shall appoint another person to complete the full number of the board. It shall be the duty of the Governor to file all vacancies which may occur in the board, and all appointments made while the Legislature is not in session, shall be submitted by the Governor to the Senate at its first succeeding meeting for its action, but all lawful action of such members made before their confirmation or rejection by the Senate, shall be valid. The board shall meet quarterly at the State Capitol in the city of Lansing, on such days in January, April, July and October of each year, as it may elect, to transact such business as may come before it. A majority of the members shall constitute a quorum for the transaction of business. Said board shall make, adopt and publish such rules and regulations and order of business as may be necessary to make this act effective, and to facilitate the transaction of its business. Special meetings of the board may also be called by the Governor, or the president of the board, at such times and places as the Governor or president shall deem proper. The Governor shall attend at least one regular meeting of the board each year, and as many of the special meetings as he shall deem proper. The members of the board shall receive no compensation, other than their traveling and other necessary expenses while in the performance of their duties, except as provided in section three of this act.

Section 3.—The State Board of Health Commissioners shall supervise the health interests of the people of this State. They shall make careful inquiry in respect to the cause of, and source of, dangerous communicable diseases, especially of epidemics; and upon the representation by any local board of health, to the secretary of this board, or to the Governor, that an epidemic of a dangerous disease exists, or is liable to occur within its jurisdiction, the Governor may direct, if he thinks the representations of such local board of sufficient importance, that one or more of the members of the State board who reside nearest to the alleged infected locality, make an investigation as to the cause of such outbreak or threatened outbreak of a dangerous disease. Such member or members shall counsel with the local board of health as to the best methods of preventing the further spread of the disease; and the local board of health shall comply with all lawful instructions given by said member or members. Each member of the State Board of Health Commissioners, who shall be required by the Governor to make such investigation, shall receive compensation therefor at the rate of ten dollars per day and necessary hotel and traveling expenses, but in no instance shall any member receive more than thirty dollars and such expenses for any one investigation. Upon the completion of such investigation, said member or members shall make and forward to the secretary of the board, a full report of their investigation, together with any other information which may be desired by the secretary. The board may compile and have printed such leaflets and pamphlets on the prevention and restriction of dangerous communicable diseases as it shall deem necessary for distribution among the people of this State.

Section 4.—The secretary shall receive an annual salary not to exceed two thousand dollars per annum, to be fixed by the State Board of Health Commissioners. The board shall quarterly certify the amount due him, and upon the presentation of such certificate, countersigned by the Governor, the Auditor General shall draw his warrant upon the State Treasurer for the amount. The secretary may appoint as clerks in his office, one chief clerk at a salary not to exceed twelve hundred dollars per annum; one clerk at a salary not to exceed one thousand dollars per annum; one clerk, stenographer and typewriter at a salary not to exceed nine hundred dollars per annum, and one clerk at a salary not to exceed eight hundred dollars per annum; and no more clerks or assistants shall be engaged or appointed than such as are provided for in this act. Said clerks shall be of good moral character and possess the necessary qualifications to enable them to perform the duties required of them in the office of the secretary. The Secretary of State shall provide suitable rooms in the capitol building at Lansing for the meetings of the board and for office room for its secretary and his clerks.

Section 5.—The secretary shall hold his office for a period not exceeding two years and ending with the January sessions of said board, but he may be removed for just cause on evidence satisfactory to said board, a majority of the members voting therefor. He shall keep a record of all transactions of the board, shall have control of all books, papers, documents, library, instruments, and all property belonging to the State board, or to his office; he shall communicate with the local boards of health within the State, and with other state boards of health commissioners and state boards of health. He shall receive and file and keep a record of all reports and communications sent to or received from local boards of health, and shall annually make a compilation of such reports and communications, or as much thereof as in the opinion of the State board will be of benefit to the people of this State.

Section 6.—The secretary shall, at the beginning of each quarter of the year, make an estimate of the necessary expenses of his office required for postage, express charges, telegrams, printing of pamphlets, et cetera, for that quarter. Such estimate shall be placed before the board at its next regular quarterly meeting, and if approved by the board, the secretary shall make a voucher for the amount, which shall be countersigned by the Governor, and upon the presentation of such voucher to the Auditor General, he shall draw his warrant upon the State Treasurer for the amount; but the sum of all such amounts drawn for the expenses for the four quarters of the year, shall not exceed two thousand dollars. At each quarterly meeting of the board, the secretary shall present an itemized statement of all expenses incurred and paid during the preceding quarter.

Section 7.—The secretary shall make an annual report to the Governor, of work done by the State Board of Health Commissioners, and in his office; said report may also contain a synopsis and compilation of reports received from local boards of health during the year and such other information that in the opinion of the secretary will be of interest and benefit to the general public. Such annual report shall be compiled and printed as soon as possible after the close of the year, and shall be paid for in the same manner as reports made by State officers. Not more than one thousand reports shall be printed and bound for any one year.

Section 8.—It shall be the duty of every health officer of each city, village and township in this State, to make prompt reports to the secretary of the State Board of Health Commissioners of every case of diphtheria, scarlet fever, measles, small-pox, or any other disease which may come to his knowledge, and which has been declared by said Board of Health Commissioners as one dangerous to the public health; and any health officer who shall wilfully refuse or neglect to make such reports, shall be deemed guilty of a misdemeanor.

Section 9.—The funds for carrying into effect the provisions of this act are hereby appropriated from any funds remaining in the State Treasury and not otherwise unappropriated.

Section 10.—All laws relating to the preservation of the public health in this State, which are now in force and are not inconsistent with the provisions of this act, shall bear the same relation to the Michigan State Board of Health Commissioners as they now bear to the Michigan State Board of Health.

Section 11.—As soon as the Michigan State Board of Health Commissioners shall have organized as provided in this act, they shall take possession of all property belonging to this State and now in possession of the Michigan State Board of Health, and the Michigan State Board of Health is hereby directed to turn over to the said State Board of Health Commissioners, all books, papers, instruments, library and other property belonging to this State and now in its possession.

Section 12.—Act number eighty-one, of public acts of 1873, entitled "An act to establish a State Board of Health, to provide for the appointment of a superintendent of vital statistics and to assign certain duties to local boards of health," and all other acts and parts of acts which are inconsistent with the provisions of this act, are hereby repealed.

MINOR INTELLIGENCE.

MONUMENTS will be erected to Skoda and Rokitansky.

TUBERCULOSIS is on the decline in Germany, especially in the cities.

THE Hygienic Council of Paris have declared against the sale of soaked beans.

THE death rate of the globe is sixty-eight per minute. The birth rate seventy.

THE Mississippi State Medical Association will convene at Jackson on April 10.

THE people of Michigan consume $23,000,000 worth of adulterated food annually.

THE Medical Examining Board of Virginia will examine candidates for license to practice medicine in that commonwealth on May 8 and 9 next.

THE mortality record of New York State shows a demise of 118,195 lives during 1894.

THE Missouri legislature is asked to pass a bill restricting the employment of hypnotism.

NEW YORK has an anti-cigarette league representing twenty-five thousand public school boys.

AN epidemic of small-pox prevails at Hot Springs, Arkansas. Forty cases have been reported.

THE trustees of the Buffalo General Hospital will erect a new hospital building to cost $150,000.

A COMBINED uterine dilator and irrigator has been introduced by Doctor H. B. Adler, of New York.

THE City Hospital of Brooklyn has been enriched $10,000 by a bequest of John P. Rolfe, of that city.

THE Board of Coroners of New York have appointed Doctor William T. Jenkins special pathologist.

THE prevailing cod-liver oil famine is attributed to the leanness of the fish during the past year or two.

MR. J. W. HULKE, F. R. C. S., president of the Royal College of Surgeons of England, died on February 19.

THE legislature of New Jersey is considering the passage of a bill providing for the prevention of blindness.

THE death rate in England and Wales for 1894 was 16.6 in 1000, the lowest ever recorded in these countries.

THE Ohio State Medical Society will hold its semi-centennial meeting at Columbus on May 15, 16 and 17.

OUT of fifteen cases of pneumonia treated at the Louisville City Hospital during February only three recovered.

THE International Congress of Gynecology and Obstetrics will hold its next meeting at Geneva, in September, 1895.

THE Homeopathic Medical Society of the State of New York has declared in favor of the individual communion cup.

THE annual meeting of the American Publishers' Association will be held at the Eutaw House in Baltimore on May 6.

THE Medical Association of Georgia will convene in forty-sixth annual session at Savannah on April 17, 18 and 19.

THE students of Milwaukee Medical College will wear the cap and gown at the graduation exercises of that institution.

BILLROTH is to have a monument erected to his memory. It will be placed in the court of honor of the University of Vienna.

THE Board of Health of Camden, New Jersey, is urging the enactment of an ordinance compelling all street and steam cars to be fumigated daily.

GRADUATES from the Boston College of Physicians and Surgeons are debarred from membership in the Massachusetts Medical Society.

KENTUCKY has 2,814 registered physicians. It also has a few who, not being qualified to register, are evading the law for the time being.

THE Brooklyn Department of Health has received a grant of $10,000 from the city authorities for the purpose of establishing an antitoxin plant.

THE erection of a ten-story office-building, to be known as "The Medical," is on the tapis at Saint Louis. It will be designed for physicians' offices.

THE Detroit Cremation Society urges the enforced adoption of cremation in the disposition of the bodies of those who have died of zymotic diseases.

ASBURY, Iowa, is to have a hospital for the insane. It will be known as Saint Joseph's, is designed to accommodate 210 patients, and will cost about $75,000.

MISS MARY JANE LANE, M. D., of Webberville, Michigan, died at her home on the 9th instant. She located in Webberville in 1877, and enjoyed a very fair practice.

A BILL has been introduced into the legislature of New York which provides for the manufacture of diphtheria antitoxin and other antitoxins in New York City.

NEBRASKA recently enacted a law regulating the practice of dentistry. In order to practice in that state the dentist must produce a diploma from a three-year college.

DUJARDIN-BEAUMETZ, M. D., of Paris, France, died at Nice on the 15th of February, aged sixty-one years. He acquired fame through his writings on therapeutics.

TUBERCULOSIS is reported to exist to an alarming extent among medical men in Russia, fifteen per cent. of the whole number of deaths being assignable to that cause.

THE latest estimate by Doctor Obetz shows that it costs the state fourteen thousand ($14,000) dollars to graduate a homeopathic physician. Is the product worth the price?

AT the close of the year ending September 30, 1894, the Central Kentucky Asylum for Lunatics contained 1,003 patients. The receipts were $150,699.90; the expenses $148,767.01.

DOCTOR DANIEL HACK TUKE, died in London on the 6th instant, aged sixty-eight years. He was the author of many medical works, one of them being a "Dictionary of Medicine."

A BILL has been introduced into the Illinois State Senate providing for the regulation of fees of physicians and surgeons. The maximum fee for any surgical operation is fixed at $100.

MUSKEGON, Michigan, has a public hospital. It was organized on February 26, and will hold charity clinics weekly. A training school for nurses, to be conducted in connection with the hospital, is contemplated for the near future.

During 1894 there were 308 deaths caused by railroad accidents within the city limits of Chicago. Forty-six deaths resulted from street car accidents in that city during the same year.

The regulation of the sale of patent medicines is the subject of a bill which has been introduced into the New York legislature. Its passage would empower the State Board of Health to regulate this industry.

Chicago and Brooklyn are vieing with each other for the medal for the greatest destruction of life from surface cars. As from two to four persons are slaughtered daily in Brooklyn it is feared Chicago will lose the prize.

Doctor Reuben Peterson, of Grand Rapids, was elected a member of the Chicago Gynecological Society at its meeting of March 15. Membership in this organization is limited to forty and Doctor Peterson is the first non-resident member elected.

At a meeting of the Chicago Gynecological Society held on March 15, Doctor Reuben Peterson, of Grand Rapids, read a paper entitled "Suspension of the Retro-Displaced Uterus by the Utero-Ovarian Ligament, with a Report of Seventeen Cases."

At the recent meeting of the Northeastern District Medical Society the following officers were elected: President, Doctor C. B. Stockwell, of Port Huron; vice-president, Doctor O. Stewart, of Port Huron; secretary and treasurer, Doctor A. J. Abbott, of Emmett.

Doctor Salzmann, of Essling, Wurtemberg, has been compiling statistics on the average duration of life among physicians and finds that in the sixteenth century they reached 36.5 years; in the seventeenth century, 45.8; in the eighteenth century, 49.8; and at the present time, 56.7.

The New York Medico-Surgical Society has been organized, its inception dating from March 4. Membership is limited to 100. The objects of the society are the discussion of medical topics and the cultivation of social intercourse. President, Doctor Edward J. Bermingham; secretary, Doctor Samuel E. Milliken.

The British Orthopedic Society was born in London on November 3, last. It will not have a permanent president, but instead a chairman will be elected at each meeting. Messrs. E. Luke Freer, of Birmingham, and A. H. Tubby, of London, were elected secretaries, and the duties of treasurer devolve upon Mr. Keetley.

The Detroit School of Anatomy and Scientific Horseshoeing was recently opened in Detroit under the auspices of the veterinary department of the Detroit College of Medicine. Doctor J. D. Rutherford delivered the address of the evening, his subject being "The Anatomy of the Horse's Foot." Papers were read on "The Horseshoer of the Future," and "Leveling of the Foot."

Doctor A. L. Arnold, of Owosso, has been chosen a delegate from Michigan to the Supreme Court of Foresters, which convenes in Europe this summer. The delegates will be in session three days, meeting in London on the first day, Glasgow on the second, and Belfast on the third. The doctor will sail from Philadelphia on July 20, accompanied by his wife whose parents reside in England. Bon voyage!

Hospitals for consumptives are being established by private beneficence in New York. General J. Watts DePeyster, of Red Hook, will have one constructed at Verbank which will accommodate 300 patients and cost $30,000. Mr. J. H. Schiff and Mr. L. G. Bloomingdale have each given $25,000 for the establishment of the Montefiore Country Home for Consumptives. These will complete the trio of hospitals for consumptives in New York. The latter institution will be dedicated to the poor.

New York legislators are considering the enactment of a law to regulate chiropody. The bill provides for the incorporation of a "Pedic Society" which shall control, through its board of examiners, the practice of pedology. Applicants for licenses to ply this profession must pass a satisfactory examination in the anatomy and physiology of the foot, therapeutics, chemistry, minor surgery, and bandaging. The board must be paid $10.00 as an examination fee, and the society reimbursed $25.00 for a certificate of qualification.

The Cincinnati Academy of Medicine elected officers on the 4th instant, the following gentlemen being chosen to have *charge d'affaires* for the ensuing year: President, Doctor S. C. Ayers; vice-presidents, Doctor R. B. Hall and C. R. Holmes; treasurer, Doctor George E. Jones; recording secretary, Doctor W. E. Schenck; corresponding secretary, Doctor J. A. Johnson; financial secretary, Doctor Robert Stewart; librarian, Doctor J. C. Culbertson; trustees, Doctors John A. Murphy, N. P. Dandridge, and James T. Whittaker.

Of 20,000 cows recently examined in France only sixty-eight were regarded tuberculous. This is an average of about three in 1,000. M. Alexandre, in reporting this fact, gives it as his opinion that the consumption of the flesh and milk of domestic animals is not the cause of the appalling mortality from tuberculosis among mankind, and emphasizes the importance of eradicating this once accepted fallacious idea from our minds. It might be advisable for the boards of health throughout the country to harken to this admonition.

During 1894 the New York State Board of Medical Examiners had 536 applications for license to practice medicine. The board representing the Medical Society of the State of New York examined 470 candidates, 316 of whom passed and 32.7 per cent. were rejected. The board representing the Homeopathic State Medical Society examined 56 candidates, 46 of whom passed and 22 per cent. were rejected. The board representing the Eclectic Medical Society of the State of New York, examined 7 candidates, 3 of whom passed and 57.1 per cent. were rejected. After a second examination 17 were rejected, 6 failed after three or more examinations, and 54 made a failure of the last chance.

CONTEMPORARY OPINION.

TRADE OR PROFESSION?

[THE PHILADELPHIA POLYCLINIC.]

A **question** that presses for answer is as to the present-day status of medicine. The old query "Is medicine a science or an art?" has lost its interest through the better definition of the distinction between science and art on the one hand, and the clearer recognition of many medical sciences as the basis of the medical art, on the other hand. But in the place of this old query has arisen one that, only a generation ago, would have been deemed an absurdity: "Is medicine a trade or a profession?"

By many, perhaps, the question is not consciously formulated. Yet it is in the atmosphere. It is read between the lines in a large proportion of the articles published in medical journals; not those alone on professional ethical topics, but in many apparently concerned only with questions of medical art or science.

Why there should be a different standard of conduct for men engaged in different occupations; why the ethics or morality of trade should confessedly be lower than that of the learned professions, it is not our purpose to inquire. Certain it is that men will seek "in the street" or "on 'change" to take advantage of one another in a way that would not be tolerated in other relations of life; and that they should do so is considered the natural and normal state of affairs. To sell a stock for a high price, knowing that it is about to fall—"unloading," as it is technically termed—is not looked upon by brokers as immoral, but as the proper thing to do. To buy land at a low price, knowing it to contain valuable mineral deposits unsuspected by the seller, is likewise regarded but as the legitimate exercise of business shrewdness. Yet these and similar practices must be unhesitatingly condemned by the moralist, whether he base his judgment upon the data of evolutionary science or upon the "golden rule" of religion.

The universally recognized rule of business is that one must seek to turn everything, his superior information included, to direct personal monetary benefit; and whoever wishes to succeed in business is compelled to conform, in greater or less degree, to the rule. In other words, competition is the ruling element in commercial life; and competition involves struggle to push one's self forward at the expense of another. To import this state of affairs into medicine would be to hinder the progress of science and to degrade the moral status of the profession.

But it may be asked, is there not competition in medicine also? Yes; but its object should be different from that of competition in trade. Away from his warehouse or counting room, the merchant may be, often is, liberal, public-spirited, self-sacrificing. His personal life is something apart from his business. Nevertheless the end and aim of mercantile life as such is the getting of money. The physician's professional work, however, is the largest part of his life and thought, and the getting of money should be but an incident therein, even in the present imperfect stage of social development.

The physician is compelled to charge and collect fees in order to meet his expenses, but his sole consideration in regard to a case of sickness ought not for that reason to be the fee. There is the human aspect, in the contemplation of suffering and in the exercise of power to prevent and relieve suffering; and there is the scientific aspect, in the contemplation of a problem in pathology or therapeutics and in the exercise of power in the endeavor to solve the problem, or to gather data toward its solution. Let the commercial aspect, the fee question, become paramount, and humanity and science must both suffer. Hence it is that we look with so much concern upon actions or utterances tending to show that the commercial aspect of the practice of medicine is becoming prominent in the minds of many. In articles written merely to attract patients; in wiles to secure indirect advertising; in efforts to abrogate salutary restrictions of the accepted code of medical ethics upon matters concerning which honest differences of opinion do not exist; in frank avowal of the pecuniary factor as an excuse for doubtful conduct by certain officials of a great medical society; in the sale, not alone of the advertising sheets, but in some instances of the reading pages and the editorial columns of medical journals to manufacturers of nostrums; in these and many other ways the effort to degrade medicine from the professional to the trade standard of morality is manifested. It therefore becomes the duty of those of clever vision to speak fearlessly and frankly in warning against the peril. Especially does it behoove those in high places to be scrupulous in their own conduct, lest they lead astray the weak and struggling.

CONSUMPTION AS AN INFECTIOUS DISEASE.

[THE MEDICAL TIMES AND REGISTER.]

THE universal furor with which sanitary boards are seized at the present time in considering tuberculosis a contagious and infectious disease amounts almost to the ridiculous.

While we are in accord with all the necessary requirements that obtain in the protection of the community from devastating diseases, yet it must be acknowledged that the infectiousness of consumption is far from being proved. We know that there are many cases of supposed infectious origin relative to the production of this disease, but what of the cases that occur irrespective of infectious or contagious element? (and they are many).

We note certain Cincinnati daily papers are flourishing the *pro* and *con* of this question with flaming headlines, and regret to see names of reputable physicians mixed up with those whose reputation has been severely questioned in this matter. Of the point of infectiousness in this disease we have before stated our belief very clearly. Tuberculosis, being dependent on an entirely different primary etiology than microörganic deposits, becomes affected by such microörganisms only as the primary condition develops. This primary condition being in no wise a contagious or infectious one in the true sense of infection and contagion, it follows that consumption, *per se*, cannot be received by one individual from another. At the same time if a person presents in his system the planting ground for the tubercle bacillus there is no doubt but that it will generate other tubercle bacilli, whether the germ be received from another person or from the air we breathe, which is even more probable.

The putting of consumptives in hospitals especially designed is an excellent thing so far as it applies to the poor and those whose home comforts are limited, but as a preventive measure intended to limit the disease to those already affected, and insure the healthy, it is all wrong, for it will not serve as an aid to the well, and only will add unnecessarily to the misery of those who are victims of the disease and unwilling to enter any such institution.

A grim forecast made by Doctor Bennet, of England, recently, but one eminently to the point, is the following:

"Social relations would be all but disorganized; a consumptive patient would be considered like a leper in olden days, one to be separated from his family, to be isolated, shut up. He would have to live months—nay, years—in a tent; his clothes should be destroyed, and whether he dies or recovers the house which he has inhabited should be burned. It would, perhaps, be a charity to mankind to kill him at once, like an animal attacked with rinderpest; for, as the duration of the ordinary forms of phthisis may extend over years, during that period every time he breathed he would be filling the atmosphere with the germs of disease, wafted by the winds to be scattered far and near." To this Doctor Ransom, in an article on "The Consumptive Scare," in the January number of *The Medical Chronicle*, adds: "Such is the logical sequel of the doctrine of the contagion of phthisis, carried to an extreme as it is now being carried by many, especially in Germany and France. The result of such teaching as I have described is already becoming apparent in many directions. Persons affected with almost any chest disease find it difficult to obtain places as domestic servants. The close ties of family affection are not always strong enough to induce relatives of consumptives to undertake what is considered to be the dangerous duty of nursing them. The sites for consumption hospitals are becoming as difficult to find as those for fever, and utterly unfounded reports as to the spread of the disease by such institutions are recklessly made, even by medical officers of health."

RECENT PUBLICATIONS.

REVIEWS.

SURGICAL PATHOLOGY AND THERAPEUTICS.*

It has been some time since so eminently satisfactory a book upon the subject of surgical pathology has been seen, as **Doctor Warren's** "Surgical Pathology and Therapeutics." The events which made **Billroth's** classical treatise the *ne plus ultra* in surgical pathology have been superseded by an era of industry and investigation which have completely changed our surgical conceptions. The surgeon of to-day cannot be considered fairly equipped for his work unless his knowledge of bacteriology and pathology be considerable. The great surgeons of the future will be made not from those possessing mere manual dexterity or technical skill but from those who are well-grounded in the scientific aspects of surgery. The whole field of surgery is traversed in the present volume, and from a historical and absolute stand-point the reader is able to acquaint himself with all that is known to the present day of the subject he may be investigating. The chapter on Shock and that on Surgical Fever are examples of the excellent and inclusive way the subject matter is handled. **Doctor Warren** is to be highly congratulated upon so excellent a contribution to American medical literature. It is one of which the profession will be grateful, and of which the nation should be proud.

*By John Collins Warren, M. D., Professor of Surgery in Harvard University. Illustrated. 832 pages. Cloth, $6.00; half-morocco, $7.00. W. B. Saunders, Philadelphia.

NOTES ON NEWER REMEDIES.*

Doctor Cerna has recognized that it is just about impossible for the average intellect to remember the names or uses of the many new drugs the activity of the chemical laboratory is producing for us. Few could give satisfactory definition of the uses of solveol or retinol without aid, and the present manual seeks to supply the reader with the most salient points concerning the employment of these new remedies. The manual has a distinct use and will doubtless find many readers.

* Their Therapeutic Applications and Modes of Administration. By David Cerna, M. D., Ph. D. Second edition. W. B. Saunders, Philadelphia.

LABORATORY GUIDE FOR THE BACTERIOLOGIST.*

This is a concise enumeration of the methods whereby bacteriological research may be carried on. It will save work and accelerate the attainment of the desired result should the student be familiar with its contents.

* By Langdon Frothingham, M. D. V., Assistant in Bacteriology in the Sheffield Scientific School of Yale University. Illustrated. Price 75 cents. W. B. Saunders, Philadelphia.

DOSE BOOK AND MANUAL OF PRESCRIPTION WRITING.*

This manual of prescription writing is one which will not be valuable to the student during his years of study, but will aid his memory as a practitioner. It is something more than its title would indicate, being a complete reference book upon the subject of which it treats.

*By E. Q. Thornton, M. D., Ph. G., Demonstrator of Therapeutics in Jefferson Medical College. Saunders' New Aid Series. Price $1.25 net. W. B. Saunders, Walnut street, Philadelphia.

MEDICAL PROGRESS.

MEDICINE.

THE TREATMENT OF TYPHOID FEVER.

Recognition of the value of cleanliness represents the most practical discovery in treatment during the present generation, and, at the same time it constitutes one of the really great discoveries in the history of medicine. The application of the principles of cleanliness more nearly meets the requirements of a real advance in curative medicine than all the other propositions known to the profession for the cure of diseases.

The symptoms of typhoid fever are too well known by all to need particular mention; the question of burning interest is what to do to be saved. The disease is produced by drinking contaminated water, and its seat of development is situated in the intestinal canal. There is a poison there which, if it could be removed before it had become absorbed into the blood, life, and even health, would be spared. Allowed to remain, the poison is drawn into the circulation, and very soon the whole body feels the depressing effect. Even at this time, if those remaining poisonous juices and germs which are contained in the bowels were either neutralized by suitable remedies, or washed entirely away by a stream of flowing water, the disease would be checked, the patient spared, and health restored.

Without waiting for development of the symptoms of typhoid fever the very first proposition is to make the patient surgically clean, which means the free and abundant use of water internally first, and externally afterwards. The bowels are drenched and cleansed by a copious douche of hot soapy water, made to pass into and out of the lower bowel, until the contents are cleared away and the returning water comes back as clear as before it entered. The relief to the sick person by following such ablution is a delight to the physician and of greatest comfort to the patient. It seems so reasonable, they will say, and in practice it is just as good as they say. Fears were formerly entertained by me, as they are to-day by some of my contemporaries, that something would be bursted by running a large volume of water into the bowels of persons sick with typhoid fever. No harm has ever been done, and neither is it likely to be so caused. Several hundred cases have been so deluged by me with large quantities of water, and in no instance has the result failed to be beneficial. The fear of doing harm may be entirely and forever dismissed. That which is not well understood by any one, always seems inconvenient, or troublesome to perform. But a little practice makes easy the methods which a little while before appeared unpleasant, even hard.

The temperature of the water used for cleansing and washing the bowels should always depend upon the temperature of the body. If there is high fever the water is more agreeable and useful to the patient when it is cool, namely, 75° Farenheit; but if the patient is chilly, or has a low temperature, the water should be at blood heat, nearly 100° Farenheit. During the first week of illness, the irrigation of the bowels should take place in the morning and again in the evening of each day. After this, one douche of water should be given each day until convalescence. The coöperation of the patient is readily accorded. The treatment takes hold of his reason, which lends both hope and help to the management of the case.

Bathing the body is performed at regular intervals and by such a system as may be convenient and suitable to the individual. The bathtub may be used when the patient is strong enough to be assisted to it, otherwise sponging with cold water is very refreshing, and useful to maintain strength and lower the heat of the body.

The most effective and most lasting influence is secured by wrapping the patient in a wet sheet. Two blankets are spread on the bed, covered with a sheet wet with cold water. The patient is wrapped in the sheet and then folded quickly and completely in the blankets. The time during which the sick one may remain in the wet pack is from one-half to one hour, or even longer if he is comfortable. Bathing opens the pores of the skin, and through them the system discharges a part of the hurtful waste of the body. This bathing should be continued, several times daily during the disease and during convalescence.

The internal treatment is uncomplicated, safe and useful. The basis of it is cold water, and always plenty of it to drink. Water cools the body and assists to cleanse it of the poison which makes it sick. The elimination is carried on through the intestinal canal, through the kidneys, through the lungs, and by the skin. Let the sick have water, it can do no harm in any case; water only does good. What cruelty it was in fever cases, to keep water from them, and what suffering it caused. A half tablespoonful of hydrozone is added to each glass of water. It is the best and most simple remedy that can be given that is likely to be of benefit in helping to cure typhoid fever. Continued for a few days, it is then laid aside for a few days and glycozone substituted in its place, both as a relief to the patient and for the beneficial effect of the remedy itself. And so on in this way the two remedies are alternated, which is found by me to be the best arrangement for administering these valuable antiseptics. The preparation, glycozone, is chemically pure, redistilled glycerine in which ozone, or concentrated oxygen, has been incorporated, and can be taken with as much freedom and safety as pure glycerine. The glycozone may be taken in doses of half a tablespoonful to a glass of water as often as water is taken during the day. When it is desired to allay nervousness and induce sleep at night, sulphate of codeine is used, in doses of from one-half to one grain, by the mouth, or one-quarter to one-half grain by the hypodermic method. This remedy tranquilizes the nervous system and induces sleep, and should be administered at night.

The typhoid fever patient receives as food, whatever is simple, at regular intervals of four hours. Milk, simple, natural milk, is nourishment of the highest importance. One egg every day, or every other day, is alternated with a small teacup of fresh pressed juice from broiled steak or mutton. The egg is pleasant to take and more nutritious, when whipped till it is light and then stirred with a small glass of milk. For a simple and nourishing artificial food, malted milk is always good.

The juices of fruits are delicious to the typhoid fever patient, and are not to be dismissed on the supposition that they are injurious. It is always interesting to observe that, when the fever is broken, and convalescence is beginning, that water in copious draughts is no longer easy for the patient to take. When the usual glass of water is handed back half drained, it is an encouraging sign of beginning restoration. For wholesome drinking, fresh lake water which has passed through a Pasteur porcelain filter is entirely reliable.

The simplicity of the foregoing plan meets every requirement, and saves nearly every case, unless there is some complication. It is my belief that doing more than this is doing less, and less than this which is so simple, is not enough. The profession agrees that no kind of drug treatment is useful or curative in typhoid fever, indeed, one of these days, in my opinion, the statement will be considered applicable to other, if not all, cases of diseases of the bowels.

The plan as proposed by me and practiced during a period of five years, consists, in review, of the following systematic management of typhoid fever:

Water used internally as a douche for free irrigation of the bowels, either simple or made soapy with pure liquid soap. Water as a drink, and as a remedy taken copiously and frequently, especially during the stage of fever. Water is indispensable, and should be given as often as is desirable and agreeable to the circumstances of the case. Frequent application of cool water to the surface of the body during the entire illness.

Remedies: Hydrozone and glycozone, for the antiseptic effect of the oxygen which is set free in the stomach and intestines. But to be of real value, these remedies are to be taken in considerable quantity largely diluted with water, else, in my opinion, they are of little use. The capacity of the bowels is so great that a little of anything cannot spread over enough of this enormous area to effect it beneficially. Cleanliness is the principle governing the use of hydrozone and glycozone.

For a remedy that soothes and brings on sleep at night, sulphate of codeine is better than chloral, besides it is the safest and best.

For food, anything that is simple and in liquid form; milk is always the best; milk and whipped eggs; pressed juice from broiled meat. The juice from fresh, ripe fruit. The nutrition taken should be at regular intervals (four hours), that sufficient time may be allowed for digestion.

Stimulants and drugs are injurious without exception, and better results are secured without their use. Typhoid fever, generally transmitted through the drinking water, is a preventable disease. Typhoid fever affects all classes, but if food and water were always pure, no class or age need contract typhoid fever. Cleanliness everywhere and always is the means at hand which makes it possible to escape typhoid fever and other diseases of the bowels. Internal cleanliness as well as external is a reasonable proposition of hope for the cure of the unhappy multitude of sick and discouraged humanity.—Elmer Lee, M. D., in *The Chicago Medical Recorder.*

PSYCHIATRY.

THE PARANOIA OF CAIN.

(PARA, in the Greek signifying beyond, and noien, to comprehend or understand, ergo, a condition of mind beyond comprehension.)

Very far back in the annals of time, almost in the beginning thereof, as we learn from sacred story, history gives us record of a woman who was very peculiar in her mind, very peculiar even for a woman. She was possessed of a singular and single serpentine auditory hallucination, which speedily became transformed into a delusion of grandeur and great importance. She heard a serpent speak. The serpent told her that she and her husband should "become as gods and live forever" if they ate of a certain fruit that grew in a certain garden of many fruits. The fruit was not her property. It was on a reservation which neither belonged to her nor to her husband, though they were in possession of and had free access to all the other trees of the garden and the fruit thereof. Her husband seemed satisfied with the conditions of possession, and got along very well with the fruit of the other trees, but the woman was seized with a sudden kleptomania, and yielding to the morbid impulse and the auditory hallucination, she stole the fruit which was not hers, and liked the taste of it, found it good and pursuaded her husband to eat likewise. Delusions of grandeur seized her, and a delirium of ambition manifested itself in the way her lovely and persuasive feminine descendants have ever done since, in a desire for dress, and her first dress was an apron of fig leaves. Her husband did not seem to care a fig for such clothing, but she made a similar dress for him, and she through insanity and he through his imbecility (her hypnotic influence), went about in their new aprons, fancying themselves sufficiently clothed. In fact, it appears that all the time before this event neither seemed to realize that they had no clothes on.

"And she conceived and bare a son whom she called Cain, and said, 'I have gotten a man from the Lord'"—another delusion. She was likewise a kleptomaniac and the victim of her arbor vitae delusion, because she stole fruit from the tree of life, for which she had no use, and which was positively hurtful to her, under the delusion that it would be good for her if she ate it and give her everlasting life.

"And she again bare him a son." The one was a "keeper of sheep," and the other "was a tiller of the ground." The one was named Cain and the other Abel.

The father of these boys was a victim of melancholia, eating his bread "in sorrow all the days of his life," and the mother was likewise a melancholic, her "sorrow being greatly multiplied," et cetera.

"In process of time it came to pass" that one of these sons, Cain, "brought of the fruit of the ground an offering unto the Lord," and the other, Abel, "brought of the firstlings of his flock and of the fat thereof." And the Lord had respect unto Abel and his offering, but unto Cain and his offering he had not respect.

You see, Cain's ego was delusionally exalted. He thought a very little gift from him was a great recognition of the Lord, and would go a long way in his sight, but the Lord did not see it in that light. "And Cain was very wroth and his countenance fell," and Cain forthwith developed paranoiacal delusions of suspicion and persecution towards Abel.

Under the baneful influence of adverse environment and the tyranny of an inherently bad organization, which he had inherited from his unfortunate neuropathic parents, these paranoiacal symptoms developed into a resistless impulse to destroy the object of his suspicion. "And Cain talked with Abel, his brother. And it came to pass when they were in the field, that Cain rose up against his brother and slew him."

Though Abel was Cain's victim, poor Cain was likewise the victim of latent inherent psycho-neuropathic degeneracy brought into activity by his lonely and isolated life, he being a tiller of the soil all by himself, having not even sheep for company, as Abel had, with a possible malarial factor superadded, for he tilled a virgin soil, in which malaria probably abounded.

The Lord appears to have been a little severe on Cain in his punishment for this unavoidable homicide, owing to the fact, doubtless, that he was not familiar with the extenuating potency of paranoia in defense of crime. Nor would he, if he understood the subject as expounded by some of the latest insanity experts, have permitted Cain to emigrate to the land of Nod and raise a neuropathic family, and build a city of paranoiacal neuropaths. For from this unfortunate mistake of the Almighty in regard to Cain and Adam and Eve came, through atavic descent, the homicidal insanity of the later descendant, Lamech, the paroenia (next akin to paranoia) of Noah, the exalted delusions of the Babel builders, *et id omne genus paranoiæ.*

RECAPITULATION.

Now, to recapitulate the salient points in this diagnosis, we have:

(1) Delusional insanity at least in one of the parents and imbecility in the other, hence mental defect in both immediate ancestors. They were naked, and unconscious of the fact—delusion.

(2) They thought fig leaves clothed them—delusion.

(3) The mother was evidently the most markedly insane, the father being rather weak in mind, or imbecile, than insane, as men often are when under the dominion of woman. "The woman tempted him and he did eat," at her bidding. She over-persuaded him, as she is proverbially capable of doing.

(4) Delusions of seeing and hearing in the mother. She saw and heard a subtle serpent talk to her.

(5) Delusions of longevity—one of the arbor vitae delusions already referred to. She expected to live forever after eating of the fruit of the tree of life.

(6) Delusion of personal importance. Exaltation of the ego. In the woman from insanity; in the man from imbecility and hypnotic influence of the woman. "They should be as gods."

From this mentally defective and insane ancestry sprung the boy who murdered his brother without real provocation or cause. The mother was especially insane, and it is the law that the mental traits of the mother descend to the sons, while those of the father pass on to the girls. Thus, through the fatal tyranny of an inherently defective psycho-neurapathic organization, Cain was not Abel to resist the homicide impulse to kill his brother.

The very nature of the act proves Cain's innocence. Abel gave Cain no adequate provocation. It was a causeless killing, due to delusions of suspicion and persecution, and hence an irresponsible homicide.

Finally, Cain was always a peculiar person. He lived by himself, tilled the soil, and got full of malaria and ideas of persecution and bad treatment; and after he had killed Abel the Lord did not destroy him, but put the mark of paranoia upon him, and he was a peculiar paranoiac ever afterward.

Moral.—The strength of the chain depends more on the quality and integrity than the size and number of its several links, and "from (paranoias) chain," whatever link you strike, tenth or ten thousandth, breaks the chains alike.

Thus, you see, a paranoiac is born badly balanced in brain ballast, and is bound to break or burst, or kill some one.

I have always felt sorry for poor Cain—in fact, have wept over his misfortune as Mark Twain at the grave of his father Adam. The Lord treated him badly, and the world has never understood his unfortunate neuropathic temperament.—C. H. Hughes, M. D., of Saint Louis, Missouri.

MEDICAL MELANGE.

TUBERCLE BACILLI IN BUTTER.

A Swiss physician introduced butter made from the milk of a tuberculous cow and containing tubercle bacilli into the abdominal cavities of guinea pigs. The guinea pigs died of tuberculosis. He then bought butter from various markets and injected five to ten centimeters of it into the abdomens of guinea pigs. Two out of twenty specimens of butter were found to contain virulent tubercle bacilli.—*Boston Medical and Surgical Journal.*

MEDICAL PRONUNCIATION.

An unfortunate uncertainty obtains among the profession of this country as to the proper pronunciation of a large class of words whose termination is—*itis.* Many prefer the continental vocalizing of *i* giving it the sound of English ē. The English profession and a very respectable portion of the American profession use the vowel *i* with its long English phonation—ī. There can be little doubt of the correctness of the usage of the latter group, so long as it is English we speak and not German or French. There is absolutely no authority for a continental vocalization of *i* in English speech, for if custom is pleaded in its favor it is easily shown that custom is widely at varience and that "—*ītis*" has more users than "—*ētis*". Neither is there any uncertainty among the lexicons, whether medical or general, for with quite remarkable unanimity they give the English phonation. Expressing our sympathy for the adherents of the continental sound we must needs leave them to their fate.

ORIGIN OF THE TERM ANESTHETIC.

MR. EDGAR WILLETT, in a communication to *The British Medical Journal*, records a conversation he had with Oliver Wendell Holmes when the latter was in England in 1886. The discussion had turned on the subject of anesthetics, when he said: "Do you know the origin of the term?" On receiving a negative answer he replied, "Then I will tell you. I believe it was I who invented it, and this is how it occurred. Many years ago when ether and chloroform were only just coming into use, Morton, the dentist at Boston, who was largely responsible for the introduction of ether, came to me and asked me if I could suggest for him a word which could be used for both drugs, and also a word which would describe the effect produced by their inhalation. After trying two or three words, esthetic occurred to me as meaning sensitive, and in consequence anesthetic as being insensitive easily followed, with anesthesia for the condition produced. That," he concluded, "was, I believe, the origin of the term."

BACTERIOLOGICAL DOCTORS.

BACTERIOLOGICAL doctors, with troops of dogs, guinea pigs, and rabbits, and numerous cultures of bacteria, are busily at work solving the vexed problems of diseases and teaching their benighted brethern those facts which, as Josh Billings says, "ain't so." The deductions of these enthusiasts are impracticable. The energies of the active practitioner are occupied in relieving the sick and suffering around him, and recording the facts learned through careful clinical observation and experience. The bacteriologist is exposed to many dangers. The pernicious habit of generalizing from a few experiments or an isolated occurrence is almost sure to seize him; the light of the laboratory lamp has something fatal about it, changing impassioned prejudices into rational convictions; beautiful theories, promising a scientific and accurate solution of troublous questions, beset him until he forgets, in admiration of the edifice, that any inaccuracy in the foundation is liable to precipitate into the dust the most imposing superstructure ever reared. These and a thousand like perils crowd the path of the bacteriological doctor from which his brother, the active practitioner. is comparatively free—free because the ideas, inspirations, and theories which constantly appeal to the brain of every intelligent physician, are daily subjected to clinical test, a very satisfactory break for headlong ambition. The medical profession must make a stand, and refuse to accept without investigation or dispute the teachings of bacteriological doctors, unless content to accept the philosophy of the ostrich, and by closing their eyes deny the existence of the interrogation marks which so plentifully intersperse these brilliant theories.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

A CASE OF SURGICAL SCARLET FEVER.*

By THEODORE A. McGRAW, M. D., DETROIT, MICHIGAN.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

THAT surgical operations render children exceedingly susceptible to scarlet fever is a fact well known to surgeons. In the resumé of the subject in **WARREN**'s recent and excellent work on "Surgical Pathology and Therapeutics," numerous high authorities are cited to substantiate this assertion. **SIR JAMES PAGET**, **HORSLEY**, **THOMAS SMITH** and others describe cases of this character. **SMITH**, indeed, in forty-three cases of lithotomy in children had the operation followed in no less than ten by an outbreak of scarlet fever. **WARREN** concludes that "a certain number, and probably a majority, of cases of so-called surgical scarlet fever are cases of genuine scarlatina." In **GUY**'s hospital, in 1879, four cases were observed in succession under the care of different surgeons, and in consequence thereof operations on children were temporarily postponed.

In that hospital during a series of years nearly thirty cases of scarlatina were observed in children after operations, and **GOODHEART**, after careful investigation, has no doubt of the correctness of the diagnosis. **HILLIER**, on diseases of children, remarks that in the hospital for sick children, of the children who contract scarlatina a very large proportion have been the subjects of a surgical operation within a week before the rash appears (**PEPPER**'s "System of Medicine"). Although the evidence in support of these views is overwhelming, there have nevertheless been many doubters as to the specific character of the disease in these cases.

HOFFA, a German authority, quoted by **DOCTOR WARREN**, has attempted an analysis of the cases reported and divides them into four types:

(1) Cases followed by a vaso-motor disturbance and characterized by a transient erythema or urticaria.

(2) Toxic erythema, due to absorption from recent wounds. These are transient in character and vanish within twenty-four hours. The absorption of antiseptics such as corrosive sublimate may cause some of these eruptions.

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*Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

(3) Eruptions due to profound septic intoxications. These are various in kind and irregular in character. They may last for several days.

(4) Cases of genuine scarlatina.

The importance of investigating these cases and of coming to definite conclusions regarding their nature and symptomatology is self-evident. The first question which will naturally arise in any given case is that of diagnosis, and it becomes pertinent for us to inquire in this connection whether septic infections may cause eruptions which may simulate scarlet fever, and if so in what proportion of cases we may expect such phenomena. I can say confidently that cases in which confusion might arise are so rare that they may be regarded as phenomenal. The transitory outbreaks of urticaria or septic erythema present symptoms differing widely from scarlatina. Eruptions due to such causes are evanescent and fail to present the other symptoms of that disease. In fact the erythema of sepsis resembles not scarlet fever but erysipelas. That produced by drugs such as corrosive sublimate exhibits features characteristic of the action of the drug. The diagnosis of such cases should not be difficult. As regards HOFFA's third class I cannot regard it as proven that the cases which actually resemble scarlet fever were not scarlet fever. One case, for instance, reported by FFOLLIOT, is as follows:

"A soldier in India received an extensive burn from the explosion of powder. On the third day a scarlet rash appeared. The temperature had been high from the beginning. In five days the eruption had disappeared and was followed by desquamation. The patient had been three years in India and in that country scarlet fever is never seen."

It is impossible from such a description to judge whether the patient presented any other symptoms of scarlet fever than the rash. In any event the conclusion that it could not have been scarlatina because that disease is unknown in India, cannot be regarded as valid when we think of the constant communication by letter and by package between England and India and the many possibilities by which contagion might have been conveyed to the soldier from the old country. In fact eruptions resembling scarlet fever and due to sepsis almost never in our climate occur in the adult. My own experience in the various forms of sepsis has been very large. I was stationed in Chattanooga as a medical officer from the battle of Chicamauga until the spring of 1865 and helped to take care of that immense multitude of badly wounded men who were left in the hospitals of that city because too badly injured to send north. The amount of pyemia and septicemia in all their varieties was something frightful. During part of that time I had charge of the gangrene wards and operated on all of the cases of hospital gangrene which were brought to that city, and I can say that never in all that experience did I see in the various phenomena presented by septic infections even a suggestion of scarlatina. I cannot find in the medical and surgical history of the war, one case reported of any eruption in wounded men simulating that disease. In my continuous hospital and private surgical practice in this city since the war, I have yet to see a case of the kind which seemed to me of doubtful diagnosis. I cannot, therefore, be other than skeptical as to the correctness of the diagnosis of physicians who describe the phenomena of scarlet fever and then attribute them to septic infection.

I have in my own practice had four outbreaks of scarlet fever following operations on children. Three of the four occurred years ago and I have lost their records. The fourth occurred recently and seemed to me so instructive in its history that I have thought it well to bring it before the society as an introductory to to-night's discussion. I expected to present with this history the nurse's chart of temperature, pulse, treatment, et cetera, but found to my chagrin when I called for it, that the nurse had in an excess of zeal destroyed it as an article of contagion.

The case occurred in a lad of fifteen under the care of DOCTOR DELOS PARKER. He was said to have had a light attack of scarlet fever when eight years of age. Since then until his last illness, he had been strong and healthy and given to athletic sports. On February 15 he went to school in the morning and in the afternoon went tobogganing. In the evening he was seized with an abdominal pain and DOCTOR PARKER was called in to see him. DOCTOR PARKER found him suffering apparently from acute indigestion and treated him accordingly. On the second day pain began to be localized in the right iliac region and he diagnosed appendicitis. On the third day, February 18, I was called in consultation, and on the morning of February 19 operated on him. I found a very foul abscess and a gangrenous appendix. I tied the appendix close to the cecum with kangaroo tendon and cut it off. The abscess cavity was thoroughly wiped out with iodoform gauze, a rubber drainage tube put in, and the wound closed. The patient began immediately to improve. The fever subsided and after a couple of days the temperature became normal in the morning and only slightly elevated at night. He did not at that time suffer at all from nausea, and began to get an appetite. As is usual with such wounds, there was for the first three days a very foul discharge and the connective tissue exposed to its contact developed some superficial sloughs. At the end of the third day, however, the discharge ceased to be offensive and the wound, although not healing by first intention, nevertheless showed a good red granulating surface from which the sloughs of tissue rapidly separated. His bowels moved sufficiently often and the area of tenderness around the wound grew constantly less. There was never at any time after the operation the slightest peritoneal infection. We considered him to be convalescent and had no doubt of his ultimate recovery.

On February 24 the wound open through the skin and muscle was sweet and clean. The sloughs of connective tissue which had lined it had nearly disappeared and there was almost no discharge from the red granulating surface. On that evening the patient had a chill and a sudden rise in temperature for which we could not account. His pulse was about 100 and his temperature 100.5° Fahrenheit. A dose of castor oil was ordered in the belief that the fever might be due to some undigested food. On the morning of February 25, when we called we found him suffering from extreme depression and nauseated. He did not vomit but felt much like it. As he had taken the oil we were disposed to regard the nausea as due to the medicine. His temperature was 102 Fahrenheit. His throat was sore and his body broken out with a scarlet rash. As we learned on inquiry that he had already had scarlet fever we were puzzled as to the diagnosis. In the evening the rash was more pronounced, his fever still considerable, the temperature keeping about the same as in the morning. On the morning of the 26th we found the rash spread all over his body from his throat to his feet. It was the typical rash of scarlatina. His throat was covered with a red rash and the tonsils slightly swollen. His tongue which on the first day had been coated white with red edges had now cleared and showed the regular strawberry appearance of scarlet fever. The fever still continued and though not high persisted with the exception of a few hours until his death, the temperature ranging thenceforward from 99° to 100° and his pulse from 80 to 96.

There was at no time any swelling of the glands of the throat, a circumstance which excluded the possibility of rubella, while the perfectly quiescent condition of the wound and abdomen put septic infection quite out of the question. The diagnosis of scarlatina was made accordingly and the house placarded. Notwithstanding this complication the patient continued to do well and we had no other thought than of his ultimate recovery when, on the morning of the 27th, new symptoms developed. Early in the morning he began to complain of pain at the pit of the stomach and vomited some undigested food. Careful examination of the abdomen revealed absolutely no cause for alarm. The abdomen was unusually flat and free from tenderness. Pressure on the epigastrium caused complaint of soreness but, elsewhere, caused no distress. The wound was perfectly clean, free from sloughs and not at all tender His temperature was 99.5°, and his pulse 90 and of good tension. A dose of castor oil was ordered to be followed by an enema. The oil was promptly vomited and the enema given in the afternoon was followed by a collapse. During this depression the temperature fell to 97° and the pulse to 45. DOCTORS PARKER and JENNINGS were sent for in haste and by prompt administration of stimulants soon brought about a reaction. In the evening he had apparently rallied but complained of pain and nausea. Opiates were ordered for the night. In the morning he began again to vomit and still complained of epigastric pain. The abdomen was still flat and without soreness. He had had no movement from the bowels. His face began to look wan and haggard and yet the absence of definite symptoms of abdominal trouble pursuaded us that the suffering was rather functional than organic, due rather to disturbance of digestion than to obstruction. In the afternoon an enema was administered and followed immediately by an alarming collapse without producing the desired movement of the bowels. DOCTORS PARKER and JENNINGS were called again in haste and found him nearly moribund. He rallied somewhat under stimulants, but his pulse continued small and feeble and he was somnolent and lethargic. I saw him again in the evening. He was apathetic and extremely weak. For the first time since the operation his bowels were bloated and tympanitic but not tender. He had been vomiting a dark green fluid. DOCTOR PARKER suggested the possibility of obstruction but the symptoms had not seemed to me to be those of obstruction. There had been lacking the violent reaction, intestinal struggle and abdominal swelling of obstruction from mechanical causes, and I was inclined to the belief that his condition was due to some hidden septic focus, which had caused irritation and finally paralysis. The event proved the correctness of DOCTOR PARKER's opinion. The lad continued to sink, went in the night into convulsions and died at 6 o'clock on the morning of the 1st of March. I should add to this history that on the second day of the eruption, DOCTOR PARKER had carefully examined the urine and found no albumin nor other evidence of kidney affection.

A post-mortem was held at 8 P. M. of the day of his death. The small intestines were found distended with gas to a point low down in the ilium. At this spot there was a volvulus and the involved intestine was packed into the upper part of the pelvis. It was darker in here than the rest of the gut. Below that point the intestines were empty and very contracted. There was nowhere any sign of inflammation or abscess in the abdominal cavity. Death was evidently due to the obstruction caused by the volvulus but it had taken place at a time when, under ordinary circumstances, the patient would have been vigorously struggling against his malady. There was not even an adhesion between the adjacent intestinal coils, not a flake, a lymph nor any spot as dark as to suggest an approaching gangrene. The cecum was adherent to the abdominal wall throughout its whole extent. Healing had taken place so perfectly that it was not possible to detect the stump of the appendix. The kangaroo ligature had disappeared and there was no remnant in the abdomen of the old abscess cavity. Buried between the cecum and the abdominal wall was a fecal concretion large as a bean. There was no sinus leading from the external wound. The kidneys were one-half larger than usual, mottled in color on the external surface and when cut through, intensely engorged with blood and inflamed. The liver and spleen showed nothing abnormal.

Studying this case now in the light thrown on it by the autopsy, we may say confidently—

(1) That the operation for the appendicitis was a success. Excepting the open granulating wound of the abdominal wall he was at the time of his death well of the appendicitis.

(2) At the time of the outbreak of the scarlatina he was not suffering from septic infection. That some absorption of septic material had taken place before the operation is possible. After the operation, all bad symptoms disappeared. His morning temperatures were normal, his evening temperatures 99° or 99.5° from February 21 to February 23, on which date the scarlatina made its appearance. The external wound had become covered with granulations, the intestinal wound had healed and there were no sinuses nor secondary abscesses. It is impossible, therefore, to attribute the outbreak to septic influences.

(3) The general malaise and fever, the uniform scarlet rash covering his whole body, the nausea and gastric distress on the morning of February 24, the sore throat, and strawberry tongue, the persistence of the rash which did not wholly disappear before his death, and finally the convulsions, due probably to uremic poisoning and the inflammation of the kidneys as discovered in the autopsy, could have no other explanation than that of the existence of scarlet fever.

(4) The early collapse of the patient before the obstruction had had time to produce organic changes in the intestine indicated a deep-seated constitutional infection which could not have been due to absorption from the wound, but which may be reasonably traced to the scarlet fever and the resulting kidney lesions. That the lad did not react to the obstruction as is usually the case, that the intestines made no apparent effort to force the point of obstruction, and that for two days no swelling of the bowels took place, must be ascribed to the same cause. It would not have been possible after the obstruction had occurred to have subjected him to an operation for its relief. He would

probably have died on the table. Had he lived, it is extremely probable that he would in time have developed the dropsy so often the result of scarlatinal poisoning.

I will add to this history that at no time did he show any symptoms of disease of the heart or lungs, and while they were not examined at the autopsy we have every reason to believe that they were not involved in the morbid action.

The great value of this history is in the demonstrated fact that this case of surgical scarlet fever, in the person of a lad who was said to have had scarlatina before, did not originate in septicemia or pyemia. There was not one of the three physicians who were present at the autopsy who was not surprised at the entire freedom of inflammatory material exhibited by the abdominal cavity after so serious an abscess.

If we put aside those cases of septic eruptions in which the evanescent and partial character of the rash and the absence of other symptoms make the diagnosis easy, we may properly entertain doubts whether the so-called surgical scarlet fevers ever differ in nature from those termed idiopathic.

I am fully in accord with **Sir James Paget** who insists upon the specific contagion in these cases notwithstanding the fact that the somewhat disorderly appearance of the symptoms in surgical cases has led to the belief that these cases are not genuine scarlatina but of septic infection of the wound.

A grave responsibility rests upon the surgeon in these cases. A mistake in diagnosis, or a belief in the non-contagious character of the disease, will tend to spread the disease broadcast in the family and in the community. This actually happened in one of my cases. I operated on the daughter of a physician, removing a mole from the skin. On the next day she broke out with scarlet fever. It was conveyed to other members of the family and one other child suffered from the disorder. A conscientious regard for the welfare of others will therefore compel us to insist upon the same isolation in these cases and the same subsequent disinfection as in non-operative scarlatina.

RABIES—HYDROPHOBIA.*

By THEODORE R. MacCLURE, Lansing, Michigan.

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INTRODUCTION.

Rabies is a disease common to both man and animals, and can be classed with the diseases dangerous to the public health. Rabies in man may be attended with one symptom which is spoken of as "fear of water" from which the term *hydrophobia* originates, but really there is no great difference between the rabies of man and the rabies of animals. Water and other liquids or even a draft of air from a window or from a fan may cause the spasm or convulsion. The spasm caused by water has led to the term hydrophobia. Many writers seem to favor using the term hydrophobia when speaking of rabies in man, and rabies when speaking of the disease in animals, although technically speaking there is no such disease as hydrophobia. It seems, however, to be a convenient usage of terms; and I may in the pages following use the term hydrophobia when speaking of rabies in man and rabies when referring to the disease in animals.

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*A paper read by title at the Sanitary Convention, held under the auspices of the State Board of Health, at Charlotte, Michigan, November 22 and 23, 1894.

Note.—In the preparation of this paper, especially that portion relating to Etiology, I am indebted to the kind assistance of Doctor George H. Cattermole, of Lansing.

Through my work in the office of the State Board of Health, in giving attention to the reports of alleged outbreaks of rabies and cases of hydrophobia, I have become much interested in the subject. The disease does not cause three thousand deaths in man in Michigan every year, as does consumption, nor does it cause such great mortality in the human race every year as does diphtheria, scarlet fever, typhoid fever or measles, but I presume there is no disease to which the human race is heir that causes more fear or consternation than does a case of hydrophobia or rabies. Many people think that small-pox is a dreadful disease and causes many deaths, but I presume that a yearly average for the last ten years will show that there have been in Michigan not many more deaths from small-pox than from hydrophobia. Neither small-pox nor hydrophobia are as frequent as they were many years ago, when preventive medicine was not known. In 1780 **Jenner** discovered preventive vaccination against small-pox, and in 1885 **Louis Pasteur** discovered the preventive treatment against hydrophobia and rabies, and to-day millions of people are being vaccinated every year to protect themselves against an attack of small-pox, and thousands of people having been bitten by dogs or other animals known or supposed to have been mad, have received treatment which has generally insured them against the development of that fearful disease—hydrophobia.

I am sorry that I am not in a position to give the results of some original researches as are most of the persons who attempt to write on this subject; but, as that is one of the impossibilities, I will endeavor to reiterate only what has probably already been said. My object in writing this paper is to place before the people some facts which may be of interest to them and may directly or indirectly be the means of saving some human lives, because it does not seem to me that there is any necessity for persons bitten by rabid animals to suffer the agonies which are attended with death from that terrible disease.

EARLY HISTORY.

Rabies has existed for many centuries; and, as the disease may occur in almost any warm-blooded animal, it is not at all improbable that there may have been cases of rabies soon after the creation of animals as mentioned in the first book of the Bible. As the disease most frequently occurs in dogs, I presume that history would record cases as early as 1,500 years before Christ, for about that time dogs were mentioned by **Moses**, and about 32, Anno Domini, dogs were spoken of as "eating the crumbs which fall from their master's table."

The early history of canine rabies is somewhat obscure, but, whenever spoken of by the early writers, it seems to be dreaded as much as at this period. **Plutarch** says that hydrophobia was first observed in the days of **Asclepias**, the God of Medicine. **Aristotle** spoke of canine rabies, but thought the disease was never communicated to the human race. **Celsus** gave the subject especial attention and believed that, on account of a morbific virus, the bite of all animals was dangerous. **Ovid** states that hydrophobia and gout were in his day reckoned among the incurable diseases. During the first centuries of the Christian era considerable attention was given to the causation and treatment of hydrophobia. Many different theories as to its causation were advanced, but **Pedanius Dioscorides** was probably about the first (in the fourth or fifth century, Anno Domini) to give an exact description of the disease. In his work on "Materia Medica" he mentioned its tranmissibility from animals to mankind, its certain fatality when once developed, and its prevention by cauterization. But up to the eighteenth century there was little progress made in ascertaining the nature and causation of rabies or hydrophobia and their restriction and prevention.

As early as 900, Anno Domini, outbreaks of rabies were recorded. "One day a mad bear, following the course of the river Saône, at last reached the quay at Lyons. Everybody fled at its approach, except some boatmen who, armed with heavy sticks, attempted to kill it. The bear, however, little intimidated by their number, rushed amongst them and bit many—about twenty. Of this party six were smothered in about twenty-seven days on account of fearful madness. The other fourteen, however, had thrown themselves into the river to escape the animal's attacks, and having to swim to the opposite bank, were thus preserved from the effects of the poison; the water of the river had saved them, for in beating against their wounds, it had washed away the venom."* In the sixteenth century, according to FLEMING, rabies was reported in Spain, Flanders, Turkey, Hungary, Austria, et cetera, and in Hungary in 1712 wild beasts of all kinds went mad, as did also many persons, and in England many dogs went mad and bit many people. "In 1768 rabies was alarmingly frequent in Boston and other towns of North America," and a few years later in Boston and vicinity rabies was present in dogs and foxes, and swine were the principal victims of the animals' rage.

It is useless to cite further outbreaks of rabies and hydrophobia, for during the fifteenth and sixteenth centuries and up to the present time history is prolific with outbreaks of the disease in animals and in man. One has but to read FLEMING's work on "Rabies and Hydrophobia" to become thoroughly convinced that these diseases were frequent and wide-spread, causing great destruction of property and human lives.

ETIOLOGY.

Some observers have thought that rabies might occur spontaneously in animals but I think there is not now much question but that most, if not all, the rabies comes from a previous case and is due to a specific poison which has been inoculated into the animal, generally by the bite of another animal. It has been claimed that certain conditions either directly or indirectly were the cause of the disease, but the recognized authorities now believe that neither climate, season, sex, age, et cetera, has anything to do with the causation of the disease.

We now know that the disease arises from the inoculation of the specific virus which seems to be more abundant in the saliva than any other secretion of the body. ROLL, FLEMING and others believe the poison is present in the blood and consequently in all parts of the body, but other authorities have failed to cause rabies by inoculation of the blood of rabic animals. M. GALTIER has shown that the saliva of animals dead of rabies or killed after having developed the disease does not lose its virulence for some time after death. Animals inoculated with the fresh saliva, blood, et cetera, do not always contract the disease, on account of some animals being less susceptible than others. FLEMING says that "dogs and cats hold the first place in the scale of susceptibility; then man and pigs; next ruminants, the sheep and the goat being more susceptible than the ox, and lastly the horse." **Renault** inoculated ninety-nine animals (horses, dogs and sheep) and only sixty-seven were affected with the disease. **Roll** says that successful inoculations vary from twenty-four to seventy per cent., whilst from the bite of dogs it varies from twenty to seventy per cent., showing that the disease is less liable to be produced by the bite of a rabid animal than from experimental inoculation, which can probably be attributed to the fact that experimental inoculation occurs under different conditions than does the bite, and that their hair, et cetera, protect the animals somewhat from the introduction of the specific virus. Then, again, it is not so sure that the poison is really inoculated by a bite as by experimental inoculation.

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*FLEMING's "Animal Plagues," 1871, page 51.

The etiology of rabies is still questioned,* but many of those who at first doubted its specific character, and its transmission by inoculation, have, on continuing their experiments and improving their methods of operation, come to conclusions almost identical with those of **Pasteur** and his school.† Among the class of writers, who draw their conclusions from experimentation, there is a consensus of opinion that the disease is due to inoculation with virus containing the specific cause of the disease.

Dana says: "In order to prove that a certain disease is autonomous, distinct and special we must establish the fact that its etiology and its clinical history are essentially uniform, or that the anatomical changes found after death are the same, or that inoculations of animals with the secretions or tissues of the victims of the disease reproduce the disease."

With regard to his first requirement—uniform etiology—there is not a case on record where rabies appeared in an animal without its having been inoculated with material from another animal which is suffering from the same disease. Usually the infection in man can be traced directly to animals suspected from their actions, of having rabies, but in some cases the injury is considered as a simple abrasion until the characteristic symptoms appear.‡

Doctor Paul Gibier states, in a letter to me, that—"The disease may be communicated by a rabid dog licking the bare part of a person's skin on which some slight abrasion exists."§

As to the second of **Dana**'s requirements—a uniformity in the clinical history—while the symptoms vary some in different animals, they are very uniform for any certain species, as the extended irritative period (furious rabies) in the dog, and the more marked stage of paralysis in the rabbit.

There are many good reasons for believing that rabies is due to microörganisms, whether a single species or not, we cannot say; different investigators find

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*Dulles: *The Medical Record*, 1877, page 672; *The Medical News*, 1894, pages 653–655. Stockwell, Brill, Spitzka, Johne: *Jahresbericht*, 1889. Von Frisch, Vienna.

†Professor A. Högyes: "Die Experimentale Basis der Antirabischen Schutzimpfungen Pasteur's," Stuttgart, 1889.

‡"American Reference Hand-Book of Medical Science," Volume VI. Ruffer: *The British Medical Journal*, Volume II, 1889, page 637.

§Welch on "Hydrophobia"—"Transactions of the Maryland Medical and Chirurgical Faculty," 1889.

In the *Annals de l'Institute Pasteur*, 1889, was published an account of the cases of Pierre Butt and his wife, who were licked on open wounds by a rabid dog. Butt was given antirabic treatment and did not have rabies; his wife declined treatment and died of the disease.

different microscopic forms present in the victims of the disease (as **Fol**'s micrococcus, **Babes**' bacillus, et cetera, and **Gibier**'s micrococcus),* and the symptoms vary enough to make a mixed infection possible.

There is strong evidence in favor of the belief that rabies is due to some biological factor or living cause; this may be a bacterium, or one of the lower animal forms, as protozoa, coccidia, or psorosperm. Considering the period of incubation, the fact that minute quantities when inoculated will cause the disease, and the ease with which the virus is rendered inert, by means which, while sufficient to destroy low forms of living organisms, do not change the chemical products contained therein, we see at once the resemblance between the properties and action of this virus and that of other diseases which are known to be due to microörganisms, and it is evident from the following facts, that the causal agent is something capable of reproduction and growth, and not a chemical poison contained in the inoculating virus: (a) filtration removes the virulent matter from the emulsion; (b) a longer or shorter period occurs, between the inoculation and the onset of the disease, in which time (period of incubation) the cause, if a biological one, has an opportunity of increasing; and (c) the exposure of rabic virus for one hour to a temperature of 50° centigrade (122° Fahrenheit), or to desiccation and direct sunlight for three hours will destroy the virulence, and exposure to a one per cent. carbolic acid solution, or to a one-tenth per cent. corrosive sublimate solution, for three hours, renders the virus inert.†

Pasteur, **Roux**, **Chamberland** and others made careful search for microörganisms in the various tissues of animals affected with rabies; small bodies were seen in the medulla which were thought to be micrococci, but later these were considered as having little or no relation to the disease. In 1884 **Gibier** described his observations of supposed micrococci in the medulla of animals dead of rabies.‡ In 1885 **Fol** was able to demonstrate small granules resembling micrococci in the lymph spaces of the cord taken from animals which had died of this disease; thin sections of the cord were stained after **Wiegert**'s method, with a solution of hematoxyline. **Babes**§ describes his observations of organisms resembling micrococci in the brain and cord of animals suffering from rabies, which are stained a rose color by **Löeffler**'s alkaline methylene blue solution. He has succeeded in making cultures of this germ, which will cause symptoms of rabies when injected into animals, but not in all cases.

Curve-shaped bacilli and spindle-shaped bacilli are described as being present in the brains of animals, and thick, curved motile bacilli are said to be found in the blood of rabbits during the stage of fever.‖

In the opinion of **Sternberg** death is caused in cases of rabies by the action of a potent chemical poison of the class of toxalbumins, which is possibly the same as the substance which **Pasteur** calls *matière vaccinale* contained in the emulsion used in the antirabic treatment and supposed by him to produce the immunity. He says it is contained in the inoculating material, but is not identical with the microörganism causing rabies.

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*Sternberg's "Manual of Bacteriology," 1892, page 522.

†Biggs: "Transactions of the New York Academy of Medicine," 1891. Welch: "Transactions of the Maryland Medical and Chirurgical Faculty," 1889.

‡Published at the School of Medicine, in Paris, 1884.

§"Les Bacteries" (second edition).

‖Woodhead: "Bacteria and their Products," page 317.

It has been found by experimentation that if large doses of the strong virus are injected into the subcutaneous tissue the animal is less likely to contract the disease than when a small amount of the strong virus is used. **Ferran** requires that his patients agree to finish the treatment before he gives them the first inoculation, because, he thinks that the immunity is in proportion to the amount of virulent virus used. **Bareggi** lost five patients by using the superintensive method, which misfortune **Ferran** attributes to using too little of the virus. These results may be due to the large amount of chemical product (toxalbumin) contained in the large dose being sufficient to prevent the growth of the microörganisms, or the poison may so stimulate the tissue cells that they are able to cope successfully with the living matter contained in the emulsion.

Pasteur and others,* I believe, have studied the action of these chemical substances found in the emulsion, et cetera. It would seem possible in reviewing the results obtained from the use of antitoxins in diphtheria, malignant edema, anthrax, et cetera, that the use of the sterilized emulsion of rabic medulla, when used in the proper amount, might give immunity from rabies.

The specific cause of the disease seems to select the central nervous system as its most favorable habitat. It is usually present in the saliva and salivary glands of dogs, as demonstrated by inoculation of other animals with this material being followed by rabies, but whether the saliva of men who have the disease is infectious is an open question. **Lagorio** writes me that he has made a number of experiments with the saliva of three rabid men, and in no instance did rabies develop in the inoculated rabbits.

In **Bardach**'s experiments the juice from the salivary glands of twenty-two persons who died of rabies caused the disease when injected into rabbits. **Bordoni** and **Uffredduzzi** made similar experiments in two cases with negative results. The glands, in **Bardach**'s experiments, were not removed until twelve or twenty-four hours after death, while those used by **Uffredduzzi** were removed in three to six hours after death; post-mortem changes may have occurred in the former.

The statistics of the **Pasteur** Institute in Moscow,† for 1892, give two instances where the disease was communicated from man to man. **Doctor Calmette** reports one instance of the disease being contracted from the bite of a man, as having occurred in the Cochin China Institute.†

PATHOLOGICAL ANATOMY.

There is "an acute hyperemia of the larynx, trachea, and bronchi" (**Osler**), and **Gowers** says there is "perivascular exudation of leucocytes, and minute hemorrhages, in the oblongata." This is found more marked in the animals which survive for some time, and is known as miliary abscess.‡ In man where the disease is so rapidly fatal this condition is not so well marked, but in men who died of paralytic rabies these changes resemble those found in the medulla of the rabbit and may be widely diffused.

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* **Tizzoni** and **Centanni**—"Chemical Vaccine Against Rabies": *The British Medical Journal*, Volume I, 1893.

† Statistics from various **Pasteur** Institutes will be found in Part II of this paper, to appear in the May issue of The Physician and Surgeon.

‡ **Barstow** and **Horsley**: "Transactions of the Clinical Society of London, November, 1888."

Welch, in describing the lesions he had observed in the post-mortem examinations of three cases of rabies, says: "These lesions were microscopical, and their extent and distribution could be determined only by the examination of a large number of sections of different parts. The lesions were especially well marked in and near the nuclei of origin of the spinal accessory, pneumogastric, and glosso-pharyngeal nerves, and in the motor nucleus of the trigeminus."

That the pathological anatomy does not show the extent and presence of the specific cause is obvious, as tissues or fluids from various parts of the body of infected animals when inoculated into healthy animals will produce the disease, although nothing can be demonstrated in the tissues or fluids to account for the disease.

SYMPTOMS IN ANIMALS.

There are two distinct varieties of the disease—the maniacal and the paralytic. The disease has three well-marked stages—prodromal, irritative, and paralytic.

The *prodromal* stage in rabies is characterized by an alteration in the manner and usual actions and habits of animals. If the disease occurs in a domestic animal which is naturally friendly, it may suddenly change, become cross and surly, and almost as suddenly again become natural and affectionate. The animal is restless and not contented to remain in one place. Many animals are dull, lazy and seek secluded places. There is irritation at the seat of the wound demonstrated by a tendency to scratch, rub or ruffle the cicatrix. Frequently the appetite is lost and in others there is a depraved ravenous appetite, evinced in dogs and pigs by eating all sorts of strange things, such as pieces of wood, and iron. Carnivorous animals "gulp" as if trying to free themselves from something, such as a bone in their throat, and vomiting frequently occurs. The visible mucous membranes are red and saliva (except in horses) drivels from the mouth. These symptoms generally last from twelve to forty-eight hours, and then pass either to the irritative or paralytic stage.

During the *irritative* stage there is great propensity to injure other animals, uneasiness, paroxysms of fury, with intervals of quietude, and exhaustion. During the paroxysms dogs may tear their bedding, or whatever comes in their way, and snap at imaginary objects. The tongue is swollen and frequently dipped in water to cool it, but the poor animal may not be able to swallow and saliva hangs in strings from its mouth. However, in some animals this symptom is not so bad, and the animal wants and takes a great amount of water. The gait or carriage of a dog is unsteady and he soon begins to totter. The dog generally goes with an unsteady gait, tail between his legs, bright and staring eyes that soon become dull, head rolling from side to side, stomach tucked up, mouth open and tongue protruding. It is said by those who have seen them that it is quite easy to distinguish a mad dog by the actions above described. In **Fleming's** work on "Hydrophobia and Rabies" can be seen a picture of a rabid dog, and it is probable that a person would never forget it should he once see one. A peculiar characteristic of a mad dog is that he is devoid of sense of pain and will hold a red-hot iron in his mouth without uttering a cry.

Cats are very savage and are very dangerous on account of their great ferocity. Horses become violent, stamp their feet, kick, bite, et cetera, and try to get loose. Cattle rarely use their teeth but paw and bellow, and use their horns and frequently break them. Pigs slaver at the mouth, bite at their fellows and become very wild. The voice of all animals is altered and strange. In dogs the voice is one of the best diagnostic symptoms. It has a peculiar high-toned, croupy, ringing sound, as if the bark and the howl were blended together. At first the paroxysms are prolonged and violent, and finally become weak and short, and it may then be said that the paralytic stage has set in.

In the *paralytic* stage there is paralysis of the lower jaw, which renders the animal unable to bite. The dog generally stays at home. If he does go away he quickly returns, and seeks some secluded spot, in which he may die. The tongue is swollen, livid and hangs out of the mouth; the saliva is tenacious and abundant, paralysis of the posterior extremities sets in and death soon follows.

Rabies generally makes quick work of the animal, and may take a rapid course and kill within forty-eight hours. It rarely lasts more than ten days, although there have been cases of canine rabies lasting twenty days. The duration depends largely upon the constitutional vigor of the animal.

Hydrophobia is an affection of the nervous system, and the stimulus which excites the paroxysm is conducted often from the ganglia of special sense, or even from the brain, so that the sight or sound of fluids, or even the idea of them, occasions equally with their contact, or with that of a current of air, most distressing convulsions (CARPENTER).

SYMPTOMS IN MAN.

There are many points of similarity between the symptoms of hydrophobia and those of rabies. There is some sense of pain in or near the seat of the wound, extending toward the body, if the injury had occurred on the limbs. There may be considerable irritation or very acute pain in the cicatrix. The old wound may swell and open, or, if yet unhealed, assume an unhealthy appearance, discharging a thin ichorous fluid instead of pus. Usually there is a general nervous disturbance; the patient becomes dejected, irritable and restless, but does not appear to have any idea of what may be the cause of his peculiar feelings, or, if he does, he is careful not to mention it; he seeks solitude or amusement away from home; his sleep is troubled; he often starts up from a sound sleep; pains are often experienced in different parts of the body; and frequently there is disorder with the digestive apparatus. After these premonitory symptoms, which vary from a few hours to a few days, the patient becomes sensible of a stiffness or tightness about the throat and he experiences some difficulty in swallowing, especially fluids, which may be considered as the commencement of the attack in man.

The difficulty in connection with swallowing rapidly increases and soon becomes quite impossible, unless it is attempted with determination, which generally throws the patient into convulsions; there is a sensation of tightness in the chest, as well as throat; difficulty in breathing and necessity for fresh air. The most marked symptoms are the spasms or convulsions which are brought on by an attempt to swallow, or may even be brought on by the mere mention of liquids or knowledge that they are near, or by a draft from the window or fan. The sound of a liquid being poured from one vessel to another, or the application of any cold or damp substance to the body may bring on the paroxysms.

The patient's face wears an expression of terror, anxiety or despair. During one of these convulsions, the patient suffers great agony and it is quite impossible to stand by and witness the suffering. The spasms generally last but a few seconds, and the patient then becomes tranquil, but the least disturbance may bring on a fresh attack. During the intervals between the spasms the patient is calm, rational and may feel thirsty, but on trying to drink is uniformly thrown into another convulsion. The patient is frequently aware of the approach of these attacks, and, fearful of doing injury, begs to be restrained. The patient may be troubled with hallucinations of both sight and hearing. Sometimes the patient gives away to wild fury, may roar, howl, curse, strike, may try to bite others or himself, and finally, through exhaustion, will sink into a gloomy and sleepy state, until attacked by another paroxysm. The tongue is swollen and red, there is often a sense of burning in the throat, with thirst which cannot be satisfied. There is generally a secretion of a viscid tenacious mucus in the fauces (called the "hydrophobic slaver"), of which the patient makes every effort to free himself and spits it out to drop wherever it may. This mucus is generally abundant as the disease advances and the lower jaw is frequently paralyzed, and the mucus flows from the corners of the mouth. Paralysis may become quite general before death. There may occur times during the disease that the patient may take both food and water without the convulsions, but it is always with much difficulty. The temperature gradually rises from the commencement of the disease, and frequently as high as 105° Fahrenheit and 106° Fahrenheit. Death generally follows after a hard convulsion. The desire to bite is rare in man, but cases are recorded where the bite of a man has caused the disease.

The duration of the disease is somewhat varied, lasting from two to ten days. In 324 cases death occurred in the majority of cases between the second and fourth days, in a few death occurred the first day, and in a few cases life was prolonged even to fifteen days.

PERIOD OF INCUBATION IN MAN.

The period of incubation is that time between the bite and the appearance of the characteristic symptoms of the disease. During this period the patient often experiences unnatural conditions. These conditions have been described on preceding pages of this paper under the head of prodromal or premonitory symptoms.

Much attention has been given to the subject of the period of incubation; and, although there has been found no fixed number of days in which the disease will surely appear, if at all, in most cases the disease shows itself between forty and sixty days. The period has frequently been much less, and even as short as one day in some cases, and in other cases as long as two and one-half or three years. ROUCHE has observed that in Algiers the average period is fifty-one days, the ordinary minimum thirty days and the maximum ninety days. DOCTOR FLEMING records 224 cases in which the latency was less than a month in 40, from one to three months in 143, from three to six months in 30, and from six to twelve months in 11 cases. TROUSSEAU says the incubation period may vary from a few days to a year. HAGUENOT cites a case where a peasant was suffering from hydrophobia on the third day after receiving his wound from a mad wolf. FINCO, of Padua, cites a case where a young woman developed the disease 14 years after being bitten by a mad dog. Instances of extremely short or extremely long periods of incubation are recorded but it is possible that there are mistakes made as regards the date of receiving the bite which causes the disease.

Doctor Bauer recorded his observations on 510 cases and found that the average period was 72 days. In the male the average period was 80 days, and in the female it was 65 days. He thought that age had considerable influence and that the period was shortened 20 days in patients under fourteen years of age. He found that in

49	cases where a	wolf	caused the bite, the average incubation period was	39	days.
293	" " "	dog	" " " " " " " "	73	"
2	" " "	fox	" " " " " " " "	33	"
31	" " "	cat	" " " " " " " "	80	"
1	" " "	cow	" " " " " " " "	30	"

Doctor Kraiouchkine, director of the Saint Petersburg Institute, informs me that his experience, during the years 1886 to 1892, leads him to announce that the period of incubation varies from 16 to 494 days; the average period being about 60 days.

Doctor Augusto F. des Santos, director of the Pasteur Institute at Rio Janerio, writes me that his experience indicates that the period of incubation is from 30 to 90 days.

Doctor Padilla, of the National Department of Hygiene of the Argentine Republic, states that in cases he has observed the average period was 40 days.

Doctor A. N. Blodgett, of Boston, says that in seventeen per cent. of all cases of rabies in man the period is three months or over.

Pasteur says that the disease shows itself in a majority of cases in 40 to 60 days after receiving the bite, which is probably the period which will most commonly be observed. However, the location of the bite has much to do in influencing the time of the appearance of the disease. It has been found that where the wound was located on the head or neck the incubation period was 35 days, on the upper extremities 81 days, and on the lower extremities 74 days.

In India, in 1893, it has been observed that in the cases of hydrophobia, the period of incubation was uniformly about 90 days.

INCUBATORY PERIOD IN ANIMALS.

In regard to the period of incubation in animals, **Doctor Fleming**, in his exhaustive work, "Hydrophobia and Rabies," gives detailed and elaborate results of different observers. **Lafoss** states that the shortest authenticated period in the *dog* that occurred in his experience was 7 days and the longest was 155. **Blaine** asserts that the majority of cases occurred between the third and seventh week. **Haubner's** experience in 200 cases showed that in 83 per cent. the period was within two months; the average being three months.

With the *cat* the incubatory period is said to be from two to four weeks.

According to **Röll** the period in the *horse* varies from 15 days to two months.

Haubner found that in the *ox* that it varied from nine days to several months. In 234 cases 10 per cent. developed the disease in about three months.

In *sheep* two weeks seems to be the minimum and four weeks the maximum.

Pigs occasionally develop rabies in nine days, but it does not usually appear until the fourth week after infection.

THE PASTEUR TREATMENT.

Prior to October 26, 1885, when M. PASTEUR announced to the Academie des Sciences de Paris that he had discovered a treatment which would prevent the development of hydrophobia in man, it was conceded generally that hydrophobia was always fatal. Imagine the great surprise and wonder which followed the announcement of this great discovery, second only perhaps in importance in preventive medicine to that of JENNER.* It is not, however, to be wondered at that the suspicious and incredulous were ready to question the efficacy of the treatment, but it is now gratifying to say that the method has been thoroughly tested by scientific men all over the world and there is probably now no doubt in any informed mind but that LOUIS PASTEUR is a great benefactor and has done much to relieve suffering humanity.

The careful and unbiased experiments of DOCTOR ERNST, of Boston, DOCTORS WELCH and KIERLÉ, of Baltimore, DOCTOR SHAKESPEARE, of Philadelphia, and others in this country have fully confirmed the statements and methods of M. PASTEUR and his illustrious co-workers in Europe.

Before PASTEUR announced his discovery, he and other experimenters spent much valuable time in trying to bring about the same results, but PASTEUR was first to make his method public, and has since treated many persons proved to be or supposed to have been innoculated with hydrophobic virus. At first his inoculations were made at his laboratory in the Rue d'Ulm; but since the method came to be recognized by nearly all the world, a grant of several million francs, from the Imperial Treasury, for a new laboratory and its equipment, and a donation of a whole block of ground in the heart of that great city, PASTEUR has built and is now occupying a magnificent institute, standing back from the street, occupying the block donated by the city and surrounded by a beautiful grass-plot. In front on the lawn will be found a bronze statue representing a boy struggling with a mad dog which indicates at least one branch of work carried on inside the building. This well-equipped laboratory is occupied by PASTEUR and his corps of untiring searchers for knowledge, ever trying to discover some new vaccine or other preventive of disease. The laboratory is for practical work in different branches of micro-biology, and associated with PASTEUR are some fifteen directors and assistants. Among these valuable assistants may be mentioned such notables as ROUX, YERSIN, METSCHNIKOFF, STRAUS, DUCLAUX, CHANTEMESSE, GRANCHER, and others, each working in his special line.

In way of digression, and as an instance of some of the recent valuable work coming from this institute, I might mention that it was DOCTOR ROUX, of the Paris PASTEUR Institute, who, at the meeting of the International Congress of Hygiene and Demography, at Budapesth, September 1 to 9, 1894, gave to the congress and to the public the results of his experiments in connection with the treatment of diphtheria by the immunizing blood serum of the horse. While DOCTOR BEHRING practically left his method a secret, DOCTOR ROUX revealed every detail of his method, and offered to supply the serum, and made known his intention to give his time to the prevention of diphtheria.

One can well see how a man of PASTEUR's temperament should have such a deep interest in a disease attended by such fearful suffering for both patient and friends. It was in 1880 that he began his study of the etiology of hydrophobia. He obtained from a child suffering with the disease a small quantity of the saliva and injected it under the skin of a rabbit; the animal died in two days. Taking some of the saliva of this rabbit, he treated another rabbit, and in that the disease was produced in a most virulent form. Continuing his experiments he found that by trephining a healthy rabbit and taking a few drops of the cerebro-spinal fluid and injecting it under the dura mater of the healthy rabbit the disease rapidly developed and with more certainty than by use of the saliva, but was not of so virulent a type. Fragments of the brain and spinal cord also produced the disease, and he then abandoned the use of the saliva. Knowing by previous experiments with anthrax virus that the virulence of the virus might be increased or decreased by inoculation into animals of another species he followed out the same lines of work with hydrophobic virus and obtained similar results. Inoculation from dog to dog killed at the same period of incubation and in practically the same time; but inoculation from dogs to monkeys gave a weaker or more attenuated virus, the virus becoming more attenuated by successive inoculations from monkey to monkey, until there came a time when the virus was so weak that it would fail to cause the disease. If this weakened virus were then inoculated into a rabbit or dog it remained inactive for a time, but by successive inoculations the virus regained its original virulency. However, if these series of inoculations be made into a rabbit with the primary virus from a dog the virus gradually grows stronger instead of weaker, until it is even more malignant than the fresh virus from a dog suffering from street rabies. For instance, if a rabbit be inoculated with the virus of a rabid dog the rabbit will show symptoms in about fifteen days, never shorter than nine days; if, however, the virus of this first rabbit be used on a second rabbit the period of incubation is shorter; if a third rabbit be likewise treated with the virus of the second, the period is still shorter, and so on until it is reduced to six or seven days, at which time the period of incubation becomes stationary or what PASTEUR calls a "fixed" virus; that is, the period of incubation is always six or seven days, and the animal certainly dies on the tenth day after inoculation. This discovery was of great importance to PASTEUR, as he was able to determine exactly when the animal would die, and was able to obtain a fixed and regular supply of virus for his every-day inoculations.

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* Up to this time the antitoxin treatment of diphtheria has not been universally adopted.

PASTEUR had observed that the spinal cord of rabbits dead from rabies gradually lost its virulence in direct ratio to the time intervening after the death of the rabbit. This and other facts lead him to believe he could obtain an inoculation material of different degrees of virulence, which could be relied upon for the treatment of human beings. Accordingly he injected a rabbit with the "fixed" virus, and when the rabbit died the spinal cord was hung in a dry, sterilized bottle and kept at a temperature of 17° centigrade to 18° centigrade (63° Fahrenheit to 65° Fahrenheit).

The cord of "one day" drying was found to be slightly weaker and when injected into another rabbit still produced the disease, but the death of the rabbit was prolonged just one day more than it would have been had the rabbit been inoculated with the fresh virus. Inoculation with the spinal cord of two days' drying prolonged life in the rabbit one day longer. He found that the virulence decreased in direct proportion to the temperature and the length of time it had been dried, the weaker the injecting emulsion, the longer the period of incubation and the longer death was delayed; the cord that had been dried fifteen days nearly uniformly failed to produce the disease; and the cord that had been dried only one day was nearly as strong as the first virus.

Doctor Uffredduzzi[*] found that if the cord was dried

2 days it produced death in 11 to 17 days, but postponing death 1 to 2 days.
3 " " " " " 14 to 16 " " " " 4 " 6 "
4 " " " " " 12 to 15 " " " " 2 " 5 "
5 " " " " " 17 to 20 " " " " 7 " 10 "
6 " " " " " 12 to 22 " " " " 2 " 12 "
7 " " " " " 23 to 29 " " " " 13 " 19 "
8 " " " " " 24 to 27 " " " " 14 " 17 "
9 " " " " " 27 to 40 " " " " 17 " 30 "
10 " " " " " 32 to 36 " " " " 22 " 26 "
11 " " " " " 30 to 35 " " " " 20 " 25 "

It had been known for some time that every microörganism during its growth excreted substances, just as higher animals excrete certain substances every day, and that some microörganisms, such as those of anthrax, malignant edema, et cetera, excrete a chemical substance (ptomain, toxin, et cetera), which when injected into an animal will render that animal immune against an invasion of the specific organisms of that disease. Pasteur was the first to point out that vaccination could probably be accomplished by use of these chemical substances, and thus opened a new field for original research.

By inoculating under the skin of a dog an emulsion of the spinal cord of a rabbit recently dead of rabies the microörganism of rabies and the chemical excrement of the microörganism are at the same time introduced. This chemical substance at once proceeds to destroy the microörganism and by the time the microörganism would naturally produce the disease the chemical substance has performed its work and has produced the immunity. If a small quantity of the rabic virus (emulsion) be introduced into an animal only a small quantity of organism and a small quantity of the vaccinating substance are introduced and the animal dies from rabies; but if 10 to 20 or 30 cubic centimetres of the emulsion be injected a large quantity of the organisms and at the same time a large quantity of the chemical vaccinating substance is introduced which overpowers the microörganism and prevents the disease from developing.

Pasteur took fifty dogs and inoculated them in ten successive days, commencing with the weakest virus and each day using one of more strength until at the end of the treatment he could inoculate them with the strongest virus, even with the virus of a dog suffering with street rabies (*rage de la rue*). In this way he produced an immunity which lasted apparantly for at least two years, and probably for a considerably longer time.

Thus Pasteur had been able to protect animals from rabies, but he found his method for animals was not entirely applicable to man. However, Pasteur was equal to the difficulty. It will be remembered the longer the cord was dried the fewer the microörganisms, but there was left a goodly quantity of their chemical excrement or vaccinating substance for his treatment of man. He made two injections each day, commencing with the cord of fourteen and thirteen days, on the second day with the emulsion of the cord of twelve and eleven days, the third day with the cord of ten and nine days, the fourth day the cord of eight and seven days drying, the fifth day only the cord of six days, and so on. This process finally came to be known as the "simple method."

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[*] From a paper by Doctor Ruffer, read before the Section on Medicine of the British Medical Association, at Leeds, August, 1889.

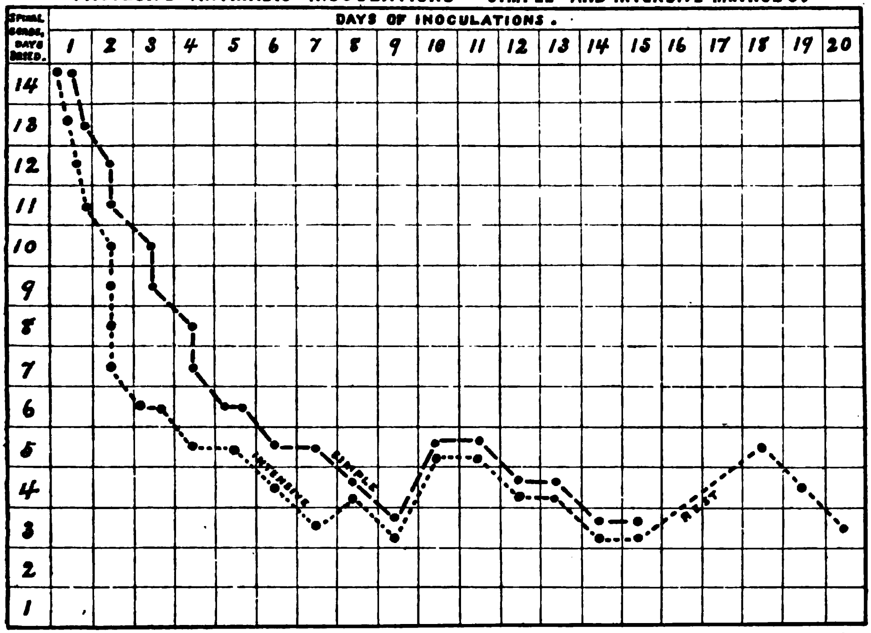
The simple method has been found sufficient in most cases; but, where the patient has been bitten badly on the face or head, a more intensive method has been found necessary, because in such cases the period of incubation is generally shorter and there is need for more active and vigorous measures, and thus the "intensive method". came to be used. Each injection consists of one-half cubic centimeter of the crushed cord in two cubic centimeters of sterilized beef tea. The patient is inoculated on the

1st day with the cord of 14, 13, 12, 11 days drying.
2nd " " " " " 10, 9, 8, 7 " "
3rd " " " " " 6 " " (Two inoculations)
4th " " " " " 5 " "
5th " " " " " 5 " "
6th " " " " " 4 " "
7th " " " " " 3 " "
8th " " " " " 4 " "
9th " " " " " 3 " "
10th " " " " " 5 " "
11th " " " " " 5 " "
12th " " " " " 4 " "
13th " " " " " 4 " "
14th " " " " " 3 " "
15th " " " " " 3 " "

On the sixteenth and seventeenth days there is a rest, and on the eighteenth, nineteenth and twentieth days there is one inoculation each day with the cord of five, four and three days drying, respectively, which ends the treatment.

The following diagram will show at a glance the "simple" and "intensive" methods of treatment employed at the PASTEUR Institute:

PASTEUR'S ANTIRABIC INOCULATIONS—"SIMPLE" AND "INTENSIVE" METHODS.



Note—Each Dot represents one injection. Each injection consists of about one-half of a cubic centimeter of spinal cord crushed in two cubic centimeters of sterilized beef tea.

By means of the hypodermic needle subcutaneous injections are made into either side of the abdomen just above the crest of the ilium. Every precaution is taken that other complications—as abscess, syphilis, erysipelas, et cetera—are not spread from one patient to another. The injecting fluid is perfectly free from all pus-forming microörganisms, the needle is sterilized after each injection and in other ways asepsis is provided. DOCTOR RUFFER says he has seen many thousands of inoculations made and has yet to observe one instance of abscess resulting therefrom.

The personal inconveniences experienced during the antihydrophobic treatment are very slight. Following the example of a number of other directors and assistants connected with other PASTEUR institutes and for protection against a possible accidental inoculation while performing their every-day duties, DOCTOR PAUL GIBIER, director of the New York Institute, inoculated himself and two of his assistants. In a paper read before the New York County Medical Association, May, 1890, he gives in detail these interesting experiments. A brief mention of their experience may be of interest to the readers of this paper.

The treatment was according to the simple method. The injections of the first four days were followed by slight irritation and redness at the site of the injection, and sleep was somewhat disturbed at night by a sensitiveness at the spot of inoculation. There was also a slight rise of temperature. These symptoms remained during the first ten days of the treatment; then the tissues seemed to have accustomed themselves to the injections and the above-mentioned symptoms decreased in severity and three days after the last inoculation there remained hardly a trace of the injections. GIBIER said there was unusual activity of his salivary glands, and several times each day he was obliged to eject; that during the last week of the treatment and the week following he had a certain heaviness of his head and felt unable to work. The same symptoms, with the following additional ones, were experienced by his assistants: after inoculation with marrow of the sixth day one assistant complained of sudden pain in his right side lasting about one hour, and at times during the last week of the treatment suffered neuralgic pains in different parts of his body, and dizziness which rendered walking difficult; during most of the treatment the other assistant suffered more or less severe local and general pains. These symptoms continued for about fifteen days after the treatment, accompanied by unusual sexual excitement, sadness, undefined preoccupation and neuralgic pains. About fifteen days after the last inoculation each assistant experienced pain in the spots where the injections were made.

DOCTOR KRAIOUCHKINE, of the Saint Petersburg Institute, says he has noticed during the treatment almost no general reaction on the organism, but, with the exception of very rare cases, he has observed lassitude, or fatigue, accompanied with headache and sleepiness but without elevation of temperature. Very often there is a local reaction of the pricked spot, redness, swelling, edema and hardening, but a little cold cream and rice powder makes it disappear rapidly. This local reaction produces principally on the individual a very thick cutaneous tissue, but abscesses have never formed.

DOCTOR ULLMANN and his four assistants also took the treatment to insure against accidental inoculations.

[TO BE CONTINUED.]

RICKETY CHILDREN.*

By CHARLES DOUGLASS, M. D., Detroit, Michigan.

[Published in The Physician and Surgeon exclusively]

The rickety condition is peculiar to childhood, and is seen most commonly between the ages of six months and two years. While we see it most frequently in hand-fed children, it is not uncommon in children who are nursed by their mothers. If we look carefully over the bony formation of our adult patients we will find a very large number of them who show in the irregular formation of the bones, especially those of the head and the epiphyses of the joints, evidence of a rickety stage during their childhood. This condition is not confined to those who have emigrated here from foreign countries, nor of native Americans is it confined to those born in cities. Looking very carefully at these patients born in cities, we find it is not confined to the poor nor those exposed to unhygienic surroundings. We find even in the country on the farms where the surroundings should be of the most salubrious character, and the food plain and abundant for parents and children, unmistakable evidences of rickets. In the cities even among the wealthy, where everything is done to secure good health of the purest type, we have marked rickety characteristics in many children. Finding it among the wealthy, can we be surprised if we find it also in all classes of the community down to the poorest? Such being the case, we are impressed with the wide-spread character of this condition.

Fortunate it is that rickets is amenable to treatment, and that, save through the deformities caused by it, it exerts little bad influence on the future health of those patients thus afflicted, when early and properly treated. The wide-spread presence or the universal liability to this affection in all classes of the community should teach us to ever be on the alert early to detect evidences of the deformities before they become unsightly and plain to the ordinary observer. Not only should we watch for these evidences, but the careful physician should look further and recognize the importance of symptoms that will present for weeks and months often before any deformity or weakness will be observable. Such being the case, is it not our duty to look upon the rickety condition as present in the body long before deformities and weakness of bony structures make plain its presence. It is not much satisfaction to the parents to be told that the child is rickety months after they felt that it was not right and that something has been wrong about it for a long time. True it is that too many parents are careless on these matters and fail to consult a physician about their children, except in severe sickness, and even where anxious, are often soothed to quietude by the misleading assurances of friends. Among the physicians also there are too many who trust the management, food, and clothing of children entirely to the parents, be they young or old, experienced or inexperienced in these matters. This should not be the case. Every physician should be so interested in the successful growth and development of the children in his families as to lose no opportunity to investigate and advise about them. It becomes his duty to make this matter so important as to impress it upon the parents and thereby educate them up to a higher standard of knowledge. It will in this way establish a realization of the importance of avoiding the rickety condition rather than curing it after damage has been done to the little one. Certain it is that proper care and forethought will in many cases save months and even years of toil and anxiety to the parents, and also humiliation and pain through all life to the patient.

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*Read before the Detroit Medical and Library Association.

Let the physician be as anxious in this matter and as attentive as is consistent with his professional duties, he will be pained many times to find bad rickety results crop out among his families where he is not in any way to blame. How is this the case? Simply because ancestral traditions frequently laugh at his advice about the feeding, clothing, bathing and exercise of the little ones, or, on the other hand, parents, grandparents or friends consider they know all about these matters, and it is unnecessary to consult the doctor about the crossness of the child; the fact that it is subject to continued colic; that it has commonly a loose, foul condition of the stools; that it does not sleep well, or that it is an unusually quiet baby; that it does not grow well; that it is slow in cutting its teeth; that it has a pale, waxy color; that its head looks too large or square-shaped; or that it does not sit up well or when older try to walk. In fact because it does not act like other children is too frequently treated as a matter of small concern, and that it will take care of itself in time. This should not be the case in this country among our enlightened people, and we should try to prevent it by educating the young parents up to a higher standard, and teaching them that there is no reason why nature has decreed that childhood should be a continued season of pain, crying, distress and misery any more than youth or adult age should be. Certain it is that if the changes and complaints which receive prompt attention in later years were equally cared for in childhood we would find rickety children very few indeed. They are becoming more numerous, rather, and we should set our faces to prevent this.

To illustrate this subject in some of its bearings let me relate the history of a few cases.

HATTIE M., aged ten months, a second child, parents American, aged about twenty-five years, in comfortable circumstances, intelligent and good livers. Mother does her own housework and nurses her baby, having an abundance of milk for it. She never fed it anything but her own milk. Having lost their first child with pneumonia the parents were extra careful of this little one. The mother was very devoted and untiring, cared for the child night and day, and enjoyed the best of health herself. Feeling that her own milk was the best food and all that was required for the little one, she gave it unstintingly at all hours night and day at intervals varying from ten minutes to one or two hours between feedings, and as the child demanded it. When I was consulted at ten months old, it was for choking or fainting spells as the mother explained them. These came on every time the child's bowels moved, and had been gradually increasing for a month, until now they were to her alarming, and she dreaded the hour daily when the child would have a stool. I attended the mother in both of her confinements and this was a strong, healthy child when born. They thought they had no occasion to consult me, and consequently I had not seen the child from the first week after birth. I was very much surprised by its appearance and evidently also surprised the mother by my non-admiration of the little one. While the child was a good size and carried plenty of flesh it looked badly otherwise. The color was waxy white, the head was square and lumpy, bosses of bony enlargement showing prominently on the frontal and parietal bones, and the little one showed little desire to use its limbs. It had only two teeth. Here was a strongly marked rickety child where you would not expect such a case to occur. This condition had grown until the neurotic irritation had developed into laryngismus stridulus, which returned every time the bowels moved, simply because she was constipated. There was no irritation or soreness about the rectum or anus, but the simple effort of difficult stool was enough in her condition to develop a spasm of the glottis. She was entirely well immediately after this was passed, but the spasms were becoming more severe daily, and the mother was becoming alarmed, because, as she expressed it, the baby daily held her breath longer, became darker in the face, had more stiffness of the hands and feet and also some twitching. She was afraid the baby would choke. She always experienced relief, the mother said, when she drew in a long breath making a crowing noise. Then she knew baby was better for that time, but dreaded the next attack as they were daily growing worse.

Realizing the rickety condition and nervous combination I apprised them of danger. Looking upon this case as due to the extreme irregularity in nursing and the consequent disturbance in the digestive canal causing the spasms, I treated the stomach with an alterative antacid mixture and instructed the mother to nurse the child only every two and a half hours and lightly at each time. Under this plan we secured better sleep for the child and mother, and a better quality of milk for food. The stools became more yellow and softer, and the spasms diminished in frequency and severity, until they had nearly disappeared. I followed this treatment with syrup of the iodide of iron and plenty of fresh air, and for two months the child improved, the laryngismus having disappeared. An epidemic of measles prevailed at the time and the child contracted it. From this she recovered without any nervous symptoms, but a slight fever subsequent to the measles caused convulsions and she died with apparently no resistance to the convulsive seizure.

Now, here was a case where the extreme kindness of the mother, and prompt irregular feeding, night and day at the cry of the child, had so disturbed the quality of the milk and the stomach of the child that imperfect nutrition caused this rickety result. Here, it is fair to infer, the unusual amount of lactic acid secreted in the stomach by continual irritation of irregularly secreted milk was a prime factor in developing rickets. If this were not the case the simple regulating of hours for feeding, with the better sleep thus secured, would scarcely explain the improvement which followed this regimen. The mother made a better quality of milk, the child did better digesting, the stools improved in color and consistence, and the spasms disappeared.

Had this mother not been under the shadow of ancestral belief in the no-harmfulness of extreme irregularity in diet and consequent crossness of the child she would have consulted me early, and thus saved the little one. This mother has now been educated that irregular nursing, irregular sleeping and mental worry make a bad quality of milk, which will surely react upon the child and give bad results such as we found. The lesson was a bitter one.

HARRY W., aged three months, the third child in the family, was a sufferer from indigestion since birth. The mother had little milk for him or her two previous children. The first child died young. The second one nearly died from digestive derangement when two weeks old, and was saved only by securing a wet nurse. Having had a trying experience with a wet nurse, the mother was anxious to avoid one with this child if possible. He was a fairly strong child at birth, and the mother had a little milk. She supplemented this with cow's milk. They had their own cow and fed it correctly. As her own milk failed, so did the child's trouble increase. They sold the cow and bought a newly calved one, thinking that younger milk would solve the difficulty. This was continued for a few weeks. The child suffered from colic; green stools and vomiting, having little sleep. This method was continued until the child was three months old, and was much atrophied. It now weighed ten pounds, looked old, skin wrinkled, dry, and too large for the little one, head square shaped, with large riokety bosses on frontal and parietal bones. The flesh was scant, soft and flabby. The mother was now convinced that she would lose her child unless a change was made soon, and she was willing to follow the advice I had given her three months previously, to get a wet nurse. I was convinced from my experience with the previous child that nothing else would agree with this little one. It was simply amazing how rapidly this child improved as soon as he obtained the nurse's milk. He became fleshy, strong and happy and gave no further trouble, growing rapidly; but will carry all through his life the marks of his rickety first three months which was alternated between colic, vomiting, purging and sleep, each claiming nearly an equal share of his time. Here I had to contend with the antipathy to a wet nurse, a desire to save expense, and the belief that, because the previous child when weaned at eleven months thrived well on cow's milk, this one could do the same from birth.

H. W., aged fourteen months, wet-nursed by a thin delicate woman, who evidently had poor milk and nursed the child too long. The nursing was supplemented with broths, only. This child suffered from constipation, was pale, anemic, and had a large head. He was listless, whining, cross and had no disposition to play. He also slept poorly, and had only six teeth. I recommended weaning him and put him at once on solid food with a liberal supply of fats and a fair amount of cow's milk. His constipation passed away and in a month's time he became playful, happy and boisterous.

This child was nursed too long by that woman and the rickety condition was approaching simply because of insufficient food suitable to that age. He required the bone-forming material which in a poor man's house he would have obtained months previously from the dinner table where his mother would have been compelled to hold him while taking her own meals. Here was a case damaged by wealth, not poverty. The constipation was due to insufficiency of food as much as the quality thereof. This case illustrates a difficulty that pertains to wealth, where the care of the child is handed over to an inexperienced nurse. Strict and non-elastic rules are enforced for the care of the little one. No liberty can be given the nurse to vary the amount or quality of food at her own will or the suggestion of the other servants. Should she do so she will lose her situation, consequently the child continues too long on the milk diet. This food is correct for a time but must be varied as the child passes the later months of the first year. He now requires more bone-forming material which experience shows is not present in sufficient quantity in old milk. He should have additional food, both of the saccharine and nitrogenous varieties. These should be added gradually and carefully in such quantities as will not disturb the stomach or bowels, increasing the new dietary until it supplants the old food. The weaning is thus established without the disturbance of the digestive organs, which at times may be a prime factor in establishing the rickety condition. I am persuaded that harm is frequently done to the children of wealthy parents by this too strict adherence to a dietetic regimen. No absolute rule can be prescribed and the physician should see to it that the diet is agreeing with the child and giving good results. This is shown by the growth, weight, color, teeth, activity, rest, stools and temper of the little one.

JANE B., aged ten months, illustrates another form of the rickety condition. Here I was called in consultation with her medical attendant, and found a child apparently well developed and in good flesh so far as size was an evidence of it. She was dull and apathetic and had no teeth. She was suffering from a slight nervous twitching of the head and back when awake. Her mother said she had nursed all her children successfully, but that this one had suffered from green stools continually since she was six weeks old. The nervous symptoms commenced at eight months old and gradually increased, but nothing was done for them until two weeks before I saw her. They were then well marked, and confined to the muscles of the head and back. At no time had there been any general convulsive seizure. Her physician said he looked upon it as choreic and treated accordingly with no improvement. The stools were green and unpleasant, and though the child had plenty of flesh it had a poor color, no teeth, and was dull and phlegmatic. Before this time no laryngismus had shown, but her physician told me she had a seizure of it about two hours after I left the house. Fearing some irritation from delayed dentition he cut the gums over the upper incisors. Unfortunately bleeding continued from these incisions, and though astringents and the cautery were applied frequently it always returned at the next nursing. When I was called the second time the child was pale, bloodless and weak, thin serous blood still oozing from the incisions. This continued at intervals until the child died.

I think there is little doubt that the continued green stools with accompanying pain and loss of sleep for eight months were the result of poor, unsuitable milk, which finally disturbed the nerve centres, and also made a poor quality of blood favorable to the hemorrhagic denouement. This case did not reach outward deformity. The absence of teeth at ten months, the want of activity, the pale color, the laryngismus and tendency to hemorrhage were the best marked rickety features in the case.

I have selected these cases to illustrate different errors which all tend to the same rickety result. Other cases would show errors of a different kind. Plenty of these are seen at older ages, and many can be dated from an attack of sickness.

The first case illustrates the error of an over-anxious young mother, acting without medical advice and having implicit faith in ancestral practices.

The second case—that of hand feeding, illustrates a very common error and one that is regularly filling the cemeteries with a large part of its bad results, and our streets with the remainder, in the shape of hammer-headed, crooked-backed, bow-legged and knock-kneed specimens of humanity.

The third case shows where many children of the affluent obtain their bad start in life, and continue as they started, always behind in the race with the strong and well developed.

The fourth case illustrates how easily there may be a delicate child among a large family of strong ones. Some error in the mother's health or her advancing years may derange the usual healthy secretion of milk. Having confidence, from past experience in nursing her children, she does not heed the warning contained in the continuously green color of the stools, until irreparable damage is done and the child's life is sacrificed, or a permanently weak condition is established.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, MARCH 11, 1895.

THE PRESIDENT, EUGENE SMITH, M. D., IN THE CHAIR.
REPORTED BY LUTHER S. HARVEY, M. D., SECRETARY.

EXHIBITION OF PATIENTS.

DOCTOR MAASS: I have the pleasure of showing you the patient upon whom I operated for hepatic abscess. The case was reported to this society several weeks ago. The patient is now able to attend to his work, suffers no pain and is strong and hearty. My remarks made in the discussion of DOCTOR WALKER's paper on the surgery of the gall-bladder have been misunderstood. I did not speak of the removal of gall-stones from the gall-bladder, but from the common duct. This operation is very difficult and in some cases it may be better not to remove the stone, but perform cystoenterotomy. The removal of gall-stones from the gall-bladder is at most not difficult. The operation should be strongly recommended. The results are very satisfactory.

EXHIBITION OF PATHOLOGICAL SPECIMENS.

DOCTOR McGRAW: I have here a pathological specimen of some interest. It is only a gall-stone, but is of special interest because it was removed from the pancreas. The patient, a woman, suffered from severe bilious colic and loss of flesh. Her condition not improving, I operated last Thursday. On getting down to the head of the pancreas I came in contact with a lump which seemed like a cancerous growth. I found this stone. On Thursday the patient's skin became yellow, and on Friday it became darker and almost black. On Sunday she was yellow again and to-day her color is much lighter. I do not believe the trouble could have been relieved in any other way.

DISCUSSION OF PAPERS.

DOCTOR McGRAW read a paper on "Surgical Scarlet Fever." (See page 145.)

DOCTOR JENNINGS: DOCTOR McGRAW has brought up a very interesting subject. In looking over the literature I find that the authorities on children's diseases doubt whether the reported cases of surgical scarlet fever are really scarlet fever, while the surgeons hold them to be true scarlet fever. The histories of these reported cases are so imperfect that they leave one in doubt as to whether they are really scarlet fever. Surgeons have been so careless in omitting characteristic symptoms that the reports have little clinical value. After the eruption appears there is not much of a chance of making a mistake in diagnosis. The only disease that resembles scarlet fever is German measles. Scarlatina begins suddenly. The rash appears within twenty-four hours. The rapid rise of temperature and the rapid pulse are almost pathognomonic. It is remarkable to have scarlet fever with a low temperature and pulse under 100. In a recent number of *The Berliner Wochenschrift*, a boy five years old was reported to have scarlet fever with a pulse of 96. This is a very rare case. I try to make the diagnosis without the eruption. In German measles we have a temperature of 103° and a pulse of 130. In scarlet fever a temperature of 103° will be accompanied by a pulse of 140, sometimes running up as high as 160 to 170. Swollen glands behind the ears are pathognomonic of German measles. The four marked symptoms of scarlet fever are a rapid pulse, sore throat, the peculiar tongue and vomiting. Without these, the diagnosis should be made with great caution. The most important factor is the pulse. In the reported surgical cases, the pulse rate is not recorded. **Smith** doubts whether these cases are scarlet fever. I do not think we will be able to tell until we have some such means of differentiation as we have in diphtheria and pseudodiphtheria. The public should be given the benefit of the doubt.

Doctor Carrier: I do not know that I can add anything to what **Doctor Jennings** has said. I believe that, by most authorities, the infection is supposed to enter the system through the tonsils. If a patient suffers from scarlet fever *after* a surgical operation he will have the same symptoms that the disease would present at any other time. That the patient may have the poison of scarlet fever in his system, be subjected to a surgical operation, and then develop scarlet fever, seems to me very probable. There are many forms of erythema which occur subsequent to surgical operations. Scarlet fever spares the face. A few lesions appear on the forehead, but only a few. Other diseases attack the face first. One of the English writers says that we make a grand mistake in thinking that German measles is a mild disease. It is often very severe. French writers make mention of the scarlatinaform eruptions that occur after surgical operations, but claim it is not scarlatina. Erythema in small-pox, at the beginning, has much the appearance of scarlet fever. Differential diagnoses are often very difficult. The duty we owe to the community demands that we call these diseases scarlet fever.

Doctor Carstens: There should be no great difficulty in making diagnoses. In **Doctor McGraw**'s case, and in other cases reported, the period of incubation seems to be cut short. The germ that produces scarlet fever and the one that causes erysipelas are, I think, the same. They differ in their manifestations, only according to the soil into which they are introduced. We cannot decide these questions definitely until bacteriology comes to our aid. I do not think there is any such disease as surgical scarlet fever. It is simply a coincidence that the patient has had a surgical operation.

Doctor Robbins: Taking into consideration the fact that the usual point of infection is the tonsils, it seems to me that an open wound would be very apt to be infected. The question should be asked whether the surgeon or any of his assistants have been in contact with scarlet fever.

Doctor Delos Parker: I have taken the pains to look up the matter and have found that it is suggested that the serum therapy is to do much for us in this line.

DOCTOR MCGRAW: There is one point which the society has not seemed to grasp, and that is that this is the only disease that follows surgical operations. Other diseases do not follow. After operation, the patient is, in some way, predisposed to scarlet fever. All the phenomena were present in the case reported. JAMES PAGET says these cases are irregular cases.

STATED MEETING, MARCH 18, 1895.

THE PRESIDENT, EUGENE SMITH, M. D., IN THE CHAIR.
REPORTED BY LUTHER S. HARVEY, M. D., SECRETARY.

DISCUSSION OF PAPERS.

DOCTOR DOUGLASS read a paper entitled "Rickety Children."

DOCTOR JENNINGS: The doctor has brought forward a subject of the greatest importance. It seems to be the general opinion that rachitis is an infrequent disease in America, but I am of the opinion that it is more common than is generally supposed. Great bony deformity does not usually occur because relief is found before the symptoms become grave, but I have seen some cases in which it was quite marked. It should be recognized early while the trouble is still amenable to treatment. Delayed dentition is a marked symptom of beginning rachitis. Every child should be considered rickety if it does not cut teeth before the tenth month unless there is some other patent cause for the delayed dentition. Profuse perspiration, catarrh, lax ligaments and inability of the child to support itself on its feet are additional symptoms by which this trouble may be recognized. The most important matter, in the consideration of this subject, is that of proper feeding. I do not think the profession generally recognizes the importance of feeding during the first two years. A child may be handicapped for life by mistake in feeding during infancy. Digestive disturbances are brought on that often continue into adult life. A child born in May and bottle-fed will almost certainly have enteric trouble during the course of the summer. A wet nurse should be advised for children born at this time of year. The administration of phosphorus and cod-liver oil is followed by good results, but the most important matter is the regulation of the diet.

DOCTOR CARSTENS: There is a question brought up by DOCTOR JENNINGS which does not seem exactly clear. The doctor says that a wet nurse should be secured, but we frequently find that children get rachitic on mother's milk. It seems to me that the trouble depends on the food the mother takes. The milk is not good because the mother does not live properly. If the milk contains the proper amount of lime the child will not get rickets. It is a question whether the lack of power of assimilation of lime may not be a frequent cause of rickets. If sufficient lime be present in the food, why is it not deposited as it should be? It seems to me to be due to the lack of proper assimilation of lime.

DOCTOR FLINTERMANN: I have been in a position to see some cases of this trouble. It has seemed to me that in spite of the very best surroundings, this condition will very often obtain. Is it not possible that there is a hereditary tendency? I recall a case in which a man, three feet tall, married a healthy woman. Every care was taken to prevent the occurrence of rachitis in their child, but it developed in spite of all means. The symptoms are frequently limited to delayed dentition and disturbed digestion when the trouble is in its incipiency. We are liable to overlook these conditions. Artificial foods are responsible for the trouble. Cow's milk is the only proper form of artificial food for infants. The patented foods are put upon the market for mercenary purposes. They are claimed to contain such and such ingredients, but we have no proof as to their value. It seems a pity that, for the sake of convenience, a man will recommend substances the composition of which he knows nothing. As regards treatment, phosphorus seems to give the best results.

Doctor Donald: If the rickets is such a general disease as the doctor says, then it is important that we should give the subject of feeding the most careful attention. I am much pleased to learn that there is a plan being worked out to place the matter of infant feeding on a scientific basis in this city. I am not here to advertise any particular firm or enterprise, but it seems to me this idea is a worthy one and deserving of the best support of the profession. The same plan has worked successfully in Boston and New York and has given eminent satisfaction to the profession. In those cities it is possible for the physician to get exactly the percentage of the various ingredients that he wishes the child to have.

Doctor Douglass: I must thank the society for their kindness in handling my paper. The remarks of Doctor Jennings in regard to the time of year in which the child is born are very apropos. It is almost impossible to bring a hand-fed infant through the summer without disturbance. Doctor Flintermann speaks very pertinently about the influence of heredity. Children are certainly born with rickets. We frequently see them with crooked bones and other symptoms of rickets at birth. Others, apparently healthy at birth, have an inherited tendency to rickets, which develops later. A syphilitic child is very likely to become rickety. The remarks in regard to proprietary foods are very apropos. The idea of anybody presuming to offer such foods to the profession. It is an insult to the profession to be asked to endorse them. I cannot see any use for these nostrums. They are sworn to have such and such a percentage of fats, sugar, proteid, et cetera, simply to impress the physician, and gain his support. Most of them are worse than worthless. In one case I remember a child that had been given one of the patent foods had had trouble with the digestion for a long time. The limbs were tender, swollen in spots and enlarged. The child was put upon raw food. Beef juice and fresh cow's milk were given, with occasionally a little orange juice. The change was very apparent. The child had been under treatment for rheumatism for two months. There is a point in diagnosis whether these cases are rachitic or scorbutic in character. A rapid disappearance of the symptoms would point to scorbutus.

EDITORIAL ARTICLES.

DELIRIUM.

Delirium, a frequent symptom in so many diseases, has for so long been an observed phenomenon, that it is disappointing to confess with how little certitude the organic lesions underlying its manifestations can be determined. A very creditable attempt to collate and arrange such knowledge as we possess has recently been made by **Doctor H. C. Wood** in an able article appearing in *The American Journal of the Medical Sciences.*

Our knowledge of cerebral pathology does not as yet permit us to answer many questions connected with cerebral action. The difference between acute mania and acute delirium is one which is recognized clinically rather than pathologically. Are these two disorders essentially distinct or are they simply different grades of the same disease? The symptomatic differences between the two conditions are found in the sudden onset of acute delirium and the usually distinct febrile reaction. In acute mania the temperature is generally stated to be unaltered, and a rise of temperature becomes a diagnostic point between mania and delirium acutum. **Doctor Wood**'s enquiries, however, reveal that a large number of cases of mania have pyrexic symptoms, so much so, that it would seem evident no sharp line can be drawn between mania and acute delirium from a consideration of the temperature.

The post-mortem appearances in acute delirium are described in **Tuke**'s "Dictionary of Medicine" as consisting of "intense cerebral hyperemia in the excited period and edema in the later stage. The cellular elements are said to be swollen, opaque, granular, and to stain badly, and the pericellular and perivascular spaces to contain red or white corpuscles; and there are sometimes white lines along the vessels from extravasated leucocytes, and occasionally small extravasations of blood in the brain substance." It seems to be firmly established that there is a group of cases of acute delirium in which the lesion is an acute periencephalitis. It is also conceivable that a toxic agent may produce delirium. That acute delirium is toxemic, however, would not invalidate the belief that a periencephalitis may be present. A bacterial origin also seems to be substantiated in some few cases. There would seem also to be another form in which acute anemia was the originating cause.

The conclusions which seem to be established are that so-called cases of acute delirium are of various characters. That omitting septic uremic and other intoxications, there are two distinct conditions, acute periencephalitis and an acute affection primarily centered in the ganglionic cells, but without demonstrable lesions.

EDITORIAL BREVITIES.

A MUSICAL PHYSICIAN.

Doctor Hemmeter, of Baltimore, is the composer of a cantata entitled a "Hymn to Hygeia." This is now under rehearsal by the German Männerchor of Baltimore. The composition is said to be in "modern classical style," and to contain a Hygeia "motive." This motive is "first given out in the reed and wind instruments," and then the tenor and bass voices enter upon a "spirited chorus in G major, the harmony beginning in full, massive, ascending chords expressing the glory and honor of the calling of the followers of Aesculapius." It is to be hoped that during the forthcoming meeting of the American Medical Association "the spirited chorus in ascending chords" may be sounded for the benefit of the many followers of Aesculapius who will then be assembled together. The composer of this cantata is not a pure esthete, as in a recent number of *The New York Medical Journal* he appears as sponsor for an apparatus for washing out the stomach.

THE DEATH OF DOCTOR HACK TUKE.

No name is probably better known among alienists than that of DOCTOR HACK TUKE. He was a great authority upon the subject of insanity in all countries, and in America was particularly well-known among psychiatrists. DOCTOR TUKE's *magnum opus* was his "Dictionary of Psychological Medicine," in two large volumes, produced in 1892. He may be considered to have inaugurated the non-restraint system.

THE HEALING POWER OF HOLES.

IN a paper read by MISS BUCKLAND, before the British Association for the Advancement of Science, is found an account of a world-wide superstition, which credits holes with healing and protective powers. Stones, shells, coins, and trephined skulls have all been accounted lucky and protective for the reason that they contain holes. MISS BUCKLAND believes the healing quality thus attributed to holes to be of necromantic origin. The hole is the symbol of the underworld, the abode of certain deities and of the spirits of dead ancestors. This indicates another of the many evidences connecting medicine with the black art.

LEGISLATION FOR THE UNIVERSITY MEDICAL SCHOOLS.

SEVERAL acts affecting the future of the medical school are said to be before the legislature. It is reported on reliable authority that a bill has been introduced by the University authorities uniting the two medical departments and making obligatory upon regular students attendance upon the lectures of the homeopathic professors. It is to be hoped that no such obligation will be implied in any enactment. The difficulties that might arise out of such a stipulation might be considerable, and it would certainly lessen the prestige and distinction of the regular school if it were caught in an ignominious flirtation with its rival. SENATOR THOMPSON has also a bill in charge, the purport of which is to eliminate sectarian teaching from the University curriculum, and asking for the repeal of the legislative enactment founding the homeopathic department.

DEGENERATION.

THERE are always alarmists to sound a warning knell, and to discover the presence of evils hitherto unobserved. DOCTOR MAX NORDAU, in his recently published work on "Degeneration," discovers evidence of moral degeneration everywhere. Ibsenism, Wagnerism, and mysticism are all shown in this work to be characteristic of degenerative lesions. What seems to be lost sight of is that degenerates have always existed. Flagellants, mystics, and even puritans have been guilty of the wildest excesses. Strange cults, assuming special inspiration or unusual enlightenment have existed throughout all time, and there is probably less mysticism prevalent to-day than at any other time of the world's history. It is also well to bear in mind that the highest attainments are always characterized by instability. The highest class of conceptions may coexist with lack of balance. Genius is closely allied to insanity not because these resemble each other, but that from stress of endeavor the ambition of the one may overleap into the hopelessness of the other. The WILDE episode certainly does not indicate any widespread degeneration, but simply that considerable genius is possible in a sexual pervert. There are not wanting indications that our appetite for decadent literature and art is becoming glutted, and that we shall return to healthier modes of thinking and feeling.

MEDICAL NEWS.

INDIVIDUAL COMMUNION SERVICE.

REVEREND CHARLES E. LEE, of the Second Baptist Church of Grand Rapids, Michigan, has invented an individual communion service upon which he has procured a patent. The device consists of three revolving disks attached to a central standard which has a ring and swivel at its top. The disks have apertures into which seventy-five tiny grape-shaped cups repose, each having capacity for a spoonful of wine. When serving communion a long handle with a hook at the end is brought into requisition, the hook being inserted into the ring at the top of the standard. The cups are inverted as soon as empty, and there is an attachment to catch the drippings. The contrivance can be elaborated to suit the tastes of the most fastidious. The purpose of this new-fangled invention is to prevent the dissemination of microbes, and the minister undoubtedly revels in the belief that this individual service affords a cinch on all microörganisms, but from the preceding description it is apparent that no provision has been made against the micrococcus viscosus of the wine, and it is therefore suggested to the scrupulously hygienic communicants that they approach the sacramental offering equipped with a straw containing an improvised sterilizer through which this elixir of the new dispensation can be imbibed with safety.

A DISAPPOINTED DESPOILER.

IT is not often that the record of current events cites an encounter between a physician and a highwayman, but an incident of this kind recently occurred in Michigan. As DOCTOR G. W. CROUCH, of Shaftsburg, was returning from a professional visit to the country, about 9 o'clock in the evening, a member of the foot-pad fraternity sprang from the roadside and, bringing the horse to a standstill, demanded that the doctor forthwith surrender money and valuables. The doctor did not feel disposed to obey, and the robber was requested to release the horse but declined to comply unless the treasure was yielded up. Alighting from the buggy the doctor proceeded to deal his assailant a blow that felled him to the ground. During the melee the horse became frightened and ran away, but the doctor assumed the rôle of an officer, walked the would-be robber to Shaftsburg, procured a warrant, and had him lodged in the county jail, in Corunna, at 3 o'clock in the morning.

MINOR INTELLIGENCE.

PORTLAND, Oregon, has 225 physicians.

OREGON has enacted an up-to-date medical law.

DOCTOR OLIVER WENDELL HOLMES left an estate valued at $112,000.

THE library of the late Doctor Oliver Wendell Holmes is valued at $804.

A BILL to amend the Ontario medical practice act is before the legislature.

HYDROPHOBIA has recently developed in New York, Florida and Minnesota.

THE French surgeon, Doctor Alphonse Guerin, died recently, aged seventy-seven years.

WASHINGTON, District of Columbia, has a new medical society—the Academy of Medicine. Doctor T. L. McDermott is its president.

THE National Association of Railway Surgeons will convene in Chicago on May 1, 2 and 3.

THE mortality in Colorado for the month of January last was at the rate of twelve per 1,000.

THE Medical Association of Missouri will convene in thirty-eighth annual session at Hannibal on May 21, 22 and 23.

WISCONSIN physicians are laboring with the legislature for the enactment of a law to regulate the practice of medicine.

THE fortieth annual meeting of the Kentucky State Medical Society will be held in Harrodsburg on June 12, 13 and 14.

THE Board of Health of Fort Wayne, Indiana, have established a pathological laboratory and engaged a bacteriologist.

THE Cleveland Medical Society and the Mississippi Valley Medical Association have recently declared against the Code.

THE North Carolina legislature is dealing with a bill which provides for the levy of a tax of $10 on every practicing physician.

THE New York Academy of Medicine lavishes $17,000 in current expenses. The assets of this society amount to half a million.

THE Saint Louis Medical Society has finally succeeded in excluding reporters from its meetings by employing a sergeant-at-arms.

THE American Committee having in charge the raising of money for the Charcot monument report the receipt of $642 to date.

THE Saint Joseph (Missouri) Physical Society protests against a bill pending in the legislature of that state prohibiting hypnotism.

PENNSYLVANIA has 20,000 people who have petitioned the legislature for the establishment of a Hahnemannian Hospital for the Insane.

A BILL providing for the regulation of medical practice in Kansas was defeated in the senate of that state. It passed the lower house.

AT a meeting of the New York Academy of Medicine, held on the 4th instant, resolutions were passed eulogizing the late Doctor Alfred L. Loomis.

IT is the opinion of Doctor George Shrady, editor of *The Medical Record*, that there are four physicians in New York City whose incomes are $100,000 each.

THE legislature of New Hampshire recently passed a bill appropriating $100,000 for the suppression of tuberculosis, but it has been vetoed by the governor.

THE bill to regulate the practice of medicine in Texas has been reported back to the legislature by the Committee on Public Health with the recommendation that it do pass.

FRIENDS and pupils of the late Dujardin-Beaumetz propose placing a marble bust of the late professor in the Hôpital Cochin, the institution wherein he performed a vast amount of work.

DOCTOR SHORT, a member of the Missouri legislature, has introduced a bill into that body making substitution by druggists a misdemeanor and imposing a fine of $500 upon the miscreant.

THE thirty-seventh annual commencement of the Long Island College Hospital occurred on March 27, 1895, the degree of Doctor of Medicine being conferred upon sixty-seven candidates.

DOCTOR G. W. SAMPSON, aged ninety-two years, died at his home in Tiffin, Ohio, on the 18th of March. He was a veteran practitioner, having pursued the healing art in that state sixty years.

THE medical college of Kansas City indulge excessively in underbidding for students, and a medical college alliance has been suggested as a measure calculated to abolish the disreputable practice.

THE OLDEST PHYSICIAN.—The oldest physician in practice is probably DOCTOR BOISY, of Havre, who is 103 years of age. He goes his rounds every day. He is a moderate drinker and smoker.

A NEW adjustable nasal saw has been introduced by Doctor H. L. Armstrong, of Brooklyn. It can be adjusted at five different angles, and is readily converted into an instrument either with straight, up-cut or down-cut blade.

THE American Medical Association will convene in Baltimore on Tuesday, May 6. Doctor Donald Maclean will deliver his presidential address upon "A Few Living Issues Affecting the History of Medicine and what Came of Them."

THE legalization of the dissection of paupers, and the incorporation of pathological and anatomical associations for the advancement of medical and surgical science, is the subject of a bill recently passed by the legislature of New Jersey.

ROQUEFORT CHEESE.—There is bad news for the lovers of this highly-flavored delicacy. There is a wide-spread outbreak of disease among the 800,000 ewes of the Aveyron region, from the milk of which the cheese is made to the value of $4,000,000 annually.

THE MICHIGAN STATE MEDICAL SOCIETY.—The meeting in Bay City is likely to be one of the most numerously attended and best meetings the society has ever held. The meeting takes place on Wednesday, June 5, under the presidency of Doctor H. O. Walker.

THE Cleveland Medical Society has adopted a novel plan to make its quarterly meetings interesting. Prominent medical men throughout the country are invited to give addresses and clinics, and the innovation has become so popular that the secretary is besieged with requests from eminent members of the profession for opportunity to appear before the society.

MONTANA has enacted a new law governing medical practice. After July 1, 1898, applicants for license must produce evidence of having attended four courses of lectures of six months each. Meetings of the board of examiners will be held in Helena on the first Tuesday of April and October of each year. Many of the defects of the old law are remedied in the new one.

THE antitoxin treatment of diphtheria will soon be subjected to an official investigation by the German government. The reporters will be expected to state the character of bacilli encountered, and whether the curative effect of the serum was certain, probable, or not noticeable.

THE Weather Bureau has inaugurated a study of the climatic conditions of American health resorts. Resident observers will be appointed in the various regions and their investigations compiled into definite data, which may be utilized by the physician when selecting a clime for patients obliged to change their abode.

HALF of the profession in Georgia are liable to prosecution for misdemeanor. The last legislature passed an act requiring all physicians to register in the Court of Ordinary in their respective counties before January 1. A very large number of doctors neglected this duty and are therefore guilty of illegally practicing medicine.

THE butchers and fishmongers in England may soon be required to pass an examination in microscopy before being granted a license. The matter is being seriously considered, and the functions of the future butcher will doubtless involve not only the slaughter and sale of animals, but the scrutiny and study of animalcules as well.

GOVERNOR STONE, of Missouri, has vetoed the bill passed by the perverted legislature of that state recognizing osteopathy as a legitimate branch of medicine. Osteopathy presupposes that all diseases are due to dislocations, and that when the latter are corrected the former disappear. There is no soft spot in Governor Stone's head.

THE project to erect a new building for the Medical Society of the County of Kings (Brooklyn), New York, is assuming tangible proportions. The committee appointed to raise the necessary funds has succeeded in collecting $11,000 from less than half the members, and this sum will be greatly augmented by the generosity of the majority.

A NEW portable sterilizer has been introduced by Doctor X. O. Werder, of Pittsburgh, Pennsylvania. It is twelve inches long, six inches wide, three and three-quarters inches high, with legs attached at the bottom which can be folded when not in use. It is made of copper with tin lining, is nickel-plated inside and outside, and weighs four and a half pounds.

THE *Deutsche Medicinische Wochenschrift* has inaugurated an investigation of the curative effect of antitoxin. Cards have been sent to physicians throughout the empire with the request that they specify the number of patients treated with, and the number without, the serum, together with the death rate in each class. A committee composed of Behring, Ehrlich, Heubner, Leyden and others, will examine the reports and announce the result.

THE Albany (New York) Medical Society has 160 members; the Buffalo Academy of Medicine has a membership of 120; the Chicago Medical Society, 750; the Cincinnati Academy of Medicine, 338; the Cleveland Medical Society, 291; the King's County (Brooklyn) Medical Society, 575; the New York County Medical Society, 1,400; the Philadelphia County Medical Society, 669. The average attendance at the meeting of these organizations is over 100 members.

THE Robert Macoy Memorial Association, recently organized in Williamsburgh, New York, will establish a hospital in memory of the late Robert Macoy. The nucleus, a house which will be utilized as a training school for nurses, has been donated the association by Mrs. Elizabeth St. John.

THE recent meeting of the Tri-State Medical Society (Illinois, Iowa and Missouri), held at Saint Louis, was a very successful affair. The papers and discussions elicited much interest and the clinical work at the various hospitals was highly instructive. The next meeting will be held at Des Moines, Iowa.

THE homeopathic grievance at the University of Michigan has finally been amicably settled. The law upon which the homeopathic college was admitted to the University will be so amended as to place the school upon a free and independent basis, in the same sense that the law department is independent of its associates. The permanent interests of the college will be in charge of a new standing committee, and the reason alleged for removal to Detroit—domination by the regular school—is obliterated by these concessions of the regents.

CONTEMPORARY OPINION.

SENSATIONAL NONSENSE NOT SANITARY SCIENCE.

[THE MEDICAL AND SURGICAL REPORTER.]

OCCASIONALLY medical scientists, by enthusiastically accepting some alluring but specious proposition prematurely, have allowed themselves to be swept into practices unfortunate for their science and disastrous to their patients. The tuberculin treatment for tuberculosis is an illustration of such an error.

Much more common are exhibitions of what may be termed burlesque science—irrational and illogical deductions from established scientific premises. Preventive medicine seems to afford peculiar opportunities for these pantomimic displays. It may be questioned whether medicine eventually is not benefited rather than embarrassed by these performances of science *bouffe*. Certain it is that they who in the name of science commit such folly and seek notoriety as public alarmists are oblivious to the truth of that homely saying of Abraham Lincoln, "One may be able to fool some people all the time and all people some of the time; but one cannot fool all the people all the time." The public press, which is the agent most frequently employed in circulating these pseudo-scientific dicta, is at the same time the factor most potent in exploiting their fallacies.

Perhaps there is nothing to which an American community is more sensitive, or which receives more the scrutiny of individuals, than those regulations of law or ordinance enforced as special protection against possible or imminent danger to the common health. The public sentiment which supports these regulations is the result of progressive education, and in this development the press is the most important factor. In matters of public health the lay press relies for proper direction upon current medical literature, and is prone to amplify and exaggerate whatever information is there obtained. Hence it behooves medical bodies and medical journals to be circumspect in their utterances and to confine themselves to unadorned facts in their deliverances. The public is not accustomed to discriminate between real medicine and newspaper medicine, and the sayings of medical men or associations delivered to the lay press direct are but cheap biddings for notoriety. Whatever *eclat* is gained is at the unnecessary expense of public alarm.

Of late we have experienced an endemic of calamity howls which would have been regarded jokes but for the sources whence they arose. For instance, the following resolution, recently adopted by a medical society, certainly displays much more of anxiety to attract attention by making a great noise than of good professional knowledge or practical common sense. The resolution recommends that "the Board of Education abolish the common drinking-cup in the public schools, the Park Commission do away with drinking-cups at springs, and railroad companies remove the common drinking-cups from all stations and trains, to prevent risk of contamination and teach the public to adopt and use individual drinking-cups."

This is a not unfair specimen of the sensational nonsense sometimes offered the public as sanitary science. It is a result of the thoroughly unscientific methods and egregious incompetency of those precocious ones who receive, without conprehending fully, an hypothesis probable in the abstract, and promulgate it as a general law positive in the concrete. There may be some extenuation in the case of our friends whose conception of the supreme spirit of medicine is a diluted Dynamis, and whose scientific faith predicates infinite potency of the infinitesimal. But it is not science in the ordinary acceptation of that much-abused word.

We do not feel called to defend the rust-corrupted tin cup of the public school, nor the galvanized solder ladle at the park fountain, nor the battered leaden antiques which adorn some railroad stations and cars, but these are offenses against public decency rather than menaces to public health. To abolish articles so absolutely essential to public convenience and comfort may be sound theoretically. When reduced to practice, however, factors must be taken into consideration which modify the theorem to such an extent as to render it impracticable. These modifying factors will determine the verdict of the public in its estimate of the utility of the proposition.

That dangers may exist in the waters supplied there can be no reasonable doubt. But the resolution does not contemplate dealing with the water. There appears to be no authentic record of the probable transmission of infection by the utensils mentioned *independent* of a contaminated water supply. Nor are we aware of an instance where in the researches of the bacteriological laboratory there has been discovered and identified any infective germs obtained from one of these public drinking-cups. Before advocating a measure which would produce an enormous amount of public inconvenience, discomfort and suffering, it would be well for astute aspirants to popular scientific repute to establish (1) the probabilities of these cups becoming infected in the course of their ordinary use; (2) the probabilities of retaining infection despite the disinfection by constant flushings with water and by exposure to the atmosphere; (3) the probabilities of users becoming infected under the necessary conditions demonstrated by present knowledge of infectious processes. When the risks can be shown to have more than a theoretical existence and a present danger can be urged against undeniable merits, science will be found ready to suggest a rational remedy.

The alternative proposed, namely, the possession and use of individual drinking-cups by each and every human being, is so manifestly inconvenient and impracticable that we are impelled to advance a suggestion in aid of our scientific friends whose cerebral powers were overstrained before a simple, universal and easily applied specific was devised. Being a novel application of an old principle perhaps some speculative sanitarian can take out letters patent and find his own reward while benefiting others.

In general terms the apparatus may be described as consisting of a hole of any desired dimensions, surrounded with a casing of any impervious material, rigid or flexible, and fitted with a sterilizer at one end and a sucker at the other. It is needless to specify the innumerable forms in which this principle may be applied, but it is evident the lady of fashion may wear her individual drinking conduit as a jeweled hair-pin or as a bracelet; the business man may carry his personal aqueduct in the same pocket with his fountain pen; the dude may secure another function for the sapling he uses as a balancing pole when his hair is mussed, and the urchin will not neglect a utensil which can be utilized as a blow-gun.

Another manifestation of sanitary insanity is a folly which amounts to sacrilege. Even the sacramental cup has been accused of conveying infection. Suffice it to say that the accusation is evidently brought by parties having no personal knowledge of the institution. Throughout all the centuries, while millions have obtained comfort and blessing by partaking of the holy communion, there has never been recorded a single instance of the transmission of infection by the cup of the New Testament. There is alsolutely no justification for agitating this matter in our present knowledge.

Apart from these flippant fancies there is abundant food for thought presented in the operations of scientific health precautions under the direct supervision of conscientious and fully qualified sanitary scientists.

So the alarm gentlemen, with their little fads or hobbies, can indulge in their small scientific amusement without startling the world by their discovering some new lurking enemy to human health and happiness, and they may find by-avenues to public notice without exciting more than amusement or ridicule.

THE LIMITATIONS OF THE TRAINED NURSE.

[THE NEW ENGLAND MEDICAL MONTHLY.]

THESE are somewhat difficult to define as there appears to be some diversity of opinion as to what her training and her duties should be.

Present indications, however, convey the impression that she is gradually encroaching upon the domains of the physician, and that ere long it will be found necessary for the profession to discourage the methods of the nurse militant. In our opinion no little injury has been done by the various journals, presumably edited in the interests of the professional nurse. In the columns of these do we find not only information pertaining to her specialty, but likewise leading articles upon purely medical and surgical topics. Glancing casually over the files of some of the journals we find papers bearing the following titles: "The Technique of Amputation," "The Management of Abnormal Presentations," "Catheterization of Fallopian Tubes," and others which treat in a scientific way of matters which concern no one but the physician himself. At the same time may be found notes and suggestions regarding the use of various drugs in certain forms of disease. It may be that the nurse during her stage of development will read and inwardly digest these things without acquiring an ambition to put them into active practice. Yet it would not be surprising were the aspirants to follow the injunctions tacitly laid down in these journals, and do a little quiet prescribing, or carry out the instructions of the attending physician —with such modifications as she herself may deem expedient.

It is perhaps natural that under such tuition she should at times venture to put her little knowledge and experience against those of the physician, to the great edification of the latter, and with doubtful advantage to herself. It seems to have never occurred to many of the young women that in the management of a clinical case her position is an entirely subordinate one. That her office lies in the faithful performance of duties indicated by the one in charge, which her experience should enable her to carry out better than anyone else, and that with the therapeutic indications of the case she is in no way concerned. She is not expected to consider disputed points and even though her opinions upon certain questions of treatment or even nursing are not in accord with those of the physician the instructions of the latter should be carried out with rigorous exactness, for upon him devolves all the responsibility.

We have no desire to unduly criticise the profession in general, but rather the trained nurse in particular—the one who has medical ideas of her own, and yearns to impart them to others—who is the *bete noir* of the physician, and one of the few discreditable features of the training school as it now exists.

The various literary organs of the nursing profession should be valuable auxiliaries to clinical teaching, and too great care cannot be exercised by its editors in placing before these young ladies an accurate and well defined picture of their duties to the physician as well as the patient and themselves.

RECENT PUBLICATIONS.

REVIEWS.

SYLLABUS OF GYNECOLOGY.*

THIS syllabus is compiled for the three-fold purpose, first to be used as lecture notes, for which it must be a wonderful convenience; secondly to enable the students to follow and remember lectures; and finally as a reference for practitioners. It is undoubtedly a valuable manual of reference.

* Based on the American Text-Book of Gynecology. By J. W. Long, M. D., Richmond. W. B. Saunders, Philadelphia.

ESSENTIALS OF DISEASES OF THE SKIN.*

THE demand for a third edition of Doctor Stelwagon's compend testifies to the appreciation with which it has been received. The cheapness and excellence of these compends is a boon for which the student should be grateful. The manual before us is a model of what such books should be.

* By Henry W. Stelwagon, M. D., Ph. D., Clinical Professor of Dermatology in the Jefferson Medical College, of Philadelphia. Third edition. W. B. Saunders, Philadelphia.

ESSENTIALS OF DISEASES.*

This is one of Saunders' well-known and justly-esteemed question compends. It is profusely illustrated, lucidly written, and conveniently arranged. The student or practitioner will find it fulfil his expectations.

* By E. Gleason, S. B., M. D., Clinical Professor of Otology, Medico-Chirurgical College, of Philadelphia. W. B. Saunders, Philadelphia.

ANTISEPSIS AND ANTISEPTICS.*

In his introduction Doctor Bernays proclaims the value of such manuals as these, when he says: "In modern surgery the life of the patient and the result of the operation depend as much upon the precautions against infection as upon operative skill upon the part of the surgeon."

Practical and theoretical antisepsis are carefully elucidated in the present volume. The principles of antisepsis are treated of from an historical and scientific stand-point, and the practical application of these is elaborated in a series of rules compiled from the practice of the best living authorities. The work will be an excellent reference book for students or practitioners.

* By Charles Milton Buchanan, M. D., Professor of Chemistry, et cetera in the National University of Washington, District of Columbia. With an introduction by Professor Augustus C. Bernays. The Terhune Company, Newark, New Jersey, 1895.

SUGGESTIVE THERAPEUTICS IN PSYCHOPATHIA SEXUALIS.*

This may be regarded as a sequel to Doctor Kraft-Ebing's book on "Psychopathia Sexualis." It contains an account of all kinds of abnormal variations of the libido-sexualis, and their treatment by hypnotic measures. If only one-half of the observations here recorded were reliable there is opened up for the treatment of sexual perversions a wide field the possibilities of which are practically illimitable in range.

The work before us bears all the signs of industry so characteristic of German medical research. It illustrates by case-record nearly every kind of sexual inversion and perversion. The medico-legal aspect of these strange cases are lucidly commented upon, and the successful way in which they are dealt with by suggestion makes the study of these cases of great interest to the physician at the present day.

This work will doubtless have a large circulation. The curiosity that panders to the erotic will scarcely be satisfied until its perusal is accomplished. It should, however, be recommended to the restricted use of the alienist or medical jurisconsult.

The work of translation has been admirably done by Doctor Chaddock, already well known to the people of Michigan.

* With especial reference to Contrary Sexual Instinct. By Doctor A. von Schrenck-Notzing (Munich, Germany). Authorized translation from the German by Charles Gilbert Chaddock, M. D., Professor of Diseases of the Nervous System, Marion-Sims College of Medicine, Saint Louis; Member of the American Medico-Psychological Association; Attending Neurologist to the Rebekah Hospital, Saint Louis, Missouri, et cetera. One volume, royal octavo, 325 pages. Extra cloth, $2.50 net; sheep, $3.50 net. Sold only by subscription to the medical profession exclusively. Philadelphia: The F. A. Davis Company, Publishers, 1914 and 1916 Cherry street.

A MANUAL OF BANDAGING.*

Of Doctor Leonard's well-known practical manuals this probably is one of the best. It describes fully and freely the use of all the cravats, slings, tailed, adhesive and plaster bandages, with which surgical art is endowed. It would be an excellent manual for the student to spend his vacation in mastering.

* Adapted for self-instruction. By C. Henri Leonard, A. M., M. D., Professor of the Medical and Surgical Diseases of Women and Clinical Gynecology in the Detroit College of Medicine. Sixth edition, with 139 engravings. Cloth, octavo, 189 pages. Price $1.50. The Illustrated Medical Journal Company, Publishers, Detroit, Michigan.

MEDICAL PROGRESS.

MEDICINE.

TRAUMATIC GLYCOSURIA.

The results of the observations made from frequent and systematic examinations of the urine in two hundred and twelve cases of head injuries are tabulated and arranged in classes according to the nature of the head injury. Of one thousand five hundred and sixty-three patients, the whole number of accident cases admitted to the hospital for the same thirteen months during which the head cases have been studied, no case apart from those with head injuries was found to have glycosuria. Of all classes of head injuries taken together about ten per cent. manifested glycosuria as the result of traumatism, while of the severe cases from twenty per cent. to twenty-five per cent. had glycosuria. Sugar may be present in the urine after slight head injury, but more frequently follows severe injuries. Albumin, together with casts and abnormal blood, was found in every instance in urine containing sugar, probably secondary, in most instances, to renal irritation produced by sugar.

From observation of these cases the authors conclude as follows: (1) That after injury, sugar may appear in the urine as early as six hours, and disappears within twenty-four, the average time for its appearance, however, being from eight to twelve hours; for the disappearance of the same from the fifth to the ninth day. (2) That a small number of cases may exhibit a permanent glocosuria from the date of injury of the head. (3) That acetone and diacetic acid are rarely found in such cases, excepting where the condition becomes a permanent glycosuria. (4) That of twenty sugar cases here recorded, eleven (fifty-five per cent. had received an injury to the right side of the head; five (twenty-five per cent.) to the left side; three (fifteen per cent.) to the occiput, and two (ten per cent.) where there was no external evidence of violence. (5) That it is impossible in the present state of the knowledge of the pathology of diabetes and glycosuria to draw any inferences from the autopsies which have been obtained. (6) That there is little to be said in regard to mortality. Of the twenty cases, eight died: six being the direct result of severe injuries, one from intercurrent disease, and the third probably from alcoholism. In the two hundred and twelve cases, sixteen were fatal, fifty per cent. of these having glycosuria.—*The Boston Medical and Surgical Journal.—The International Medical Magazine.*

SURGERY.

RELAPSING TYPHLITIS.

This article supplements a former one in this journal for April 22, 1893, in which fourteen cases were reported. Eighteen cases with complete histories are now cited, operation having been performed, in accordance with the writer's views, during the quiescent period after every sign of inflammation had disappeared.

The author considers that localized peritonitis—typhlitis, perityphlitis, and appendicitis—is due in the majority of cases to the *bacterium coli commune.* This organism has been demonstrated to be present in the entire length of the alimentary tract, and appears to be harmless when found in the normal intestine, but is easily increased in virulence by any morbid condition, as obstruction of the bowel, strangulation, inflammatory diarrhea, and advanced constipation. The preventive treatment of the affection consists of means that render the bacteria non-virulent.

Two elements are necessary for the production of an attack of localized peritonitis through the medium of the appendix; the first is a lesion of the bowel which renders the colon bacillus virulent, and the second a lesion in the appendix that will permit the bacteria to reach the peritoneum. In this affection several attacks usually occur unless the first terminates in suppuration and by this means removes the cause of the trouble. The morbid condition necessary to produce relapses may be occlusion of the lumen of the appendix, the contents of the tube being unable to escape; inflammatory material may be imbedded in a mass of firm adhesions; the organ may be in a condition adapted to volvulus; or a calculus or fecal concretion may be lodged within it. Ulceration and perforation play little part as causal factors.

The cases adapted for operation are few. Where there is constant tenderness, some swelling in the cecal region with frequent attacks of pain and fever, no measure short of operation will answer, as the appendix is then distended with pus. In examples not so marked the attacks of typhlitis may be brought to an end by the following measures: The digestion must be carefully watched; the food must be simple, digestible, and well masticated, the meals regular, and a period allowed for rest after eating, the bowels must act daily. Massage of the abdomen has an admirable effect by promoting the absorption of inflammatory exudates and encouraging normal action of the bowels. Intestinal antiseptics are useful, of which salol appears to be the most efficient.

In these operations, with one exception, the incision has been made directly over the cecum. The dealing with adhesions constitutes the real difficulty of the operation, as they may hide a perforation in the cecum or contain a thin and dilated ureter. The iliac veins are also in some danger. After the incision is made, the serous coat of the appendix is divided, the process is ligatured, the projecting mucous membrane is then cut away and the detached peritonium carefully stitched over the stump. The wound is closed by means of a continuous silk suture of the peritoneum and a series of silkworm-gut sutures which involve the muscles and skin.

A good recovery followed operation in all these cases except one, which was twice postponed on account of the nervous excitement of the patient. A nervous restlessness developed after operation with ceaseless movements which continued until his death on the fourth day.—*The British Medical Journal.*—*The International Medical Magazine.*

THERAPEUTICS.

THE GOLD PREPARATIONS IN SOME SKIN DISEASES AND SYPHILIS.

There are so many preparations of a novel nature, or which are merely revivals of old ones in a new form, being daily offered to the medical practitioner that he is often at a loss whether to use any of them. Not content with the inherent qualities of these preparations, their promoters either vaunt them as universal panaceas or construct the reading matter so clumsily that one naturally inclined to test the efficacy of the drugs calmly puts them aside until such evidence is forthcoming as will prove convincing and be clearly set forth. It is for this reason that clinical experience is so valuable when based upon careful observation and a knowledge of the conditions present.

Our knowledge of the therapeutical action of gold has, up to within a few years, been based upon the hypothetical dicta of the alchemists. Gradually the matter was taken up again, at first by the Arabian physicians and afterward in Europe. Once more it fell into disuse, and was rescued from oblivion by Hahnemann, who introduced it in his pharmacopeia. However, this did not give it much of an impulse, and it is only of late years that this metal has undergone any serious investigation concerning its therapeutical properties. Among American investigators Bartholow, Heneage Gibbes, and Shurly are the most prominent. Doctor Shtcherbok has made thorough investigations also.

The most active salt of gold is the bromide, and it is particularly so upon the nervous structures, but small doses being necessary to produce effects. The action of gold is essentially that of an alterative. It has no cumulative effect; but, when toxic doses are administered, mental excitement, amounting to delirium at times, manifests itself. A prominent symptom of its excessive action is an excessive flow of saliva, the so-called *aurism*. Remembering this in connection with the fact that very small doses produce the effects of the remedy, more especially in the form of the bromide, some care should be exercised in its administration. Among the therapeutic effects of gold may be noted the fact that it is tonic, more especially to the nervous system, and this accounts for the fact that it is an aphrodisiac of no mean power. It was highly esteemed many years ago as an antisyphilitic, and recent experience confirms this view, more especially in the later forms of the disease.

The cutaneous troubles in which I have had occasion to employ the gold preparations to any extent are limited. In acne and eczema of a subacute or chronic character I have found arsenauro an invaluable adjuvant. On the other hand, in chronic eczema and in the later manifestations of syphilis mercauro has proved itself almost a specific, so much so that its administration was always attended by marked improvement, which ceased so soon as it was discontinued. This it was which attracted my attention to the gold preparations, and in investigating their therapeutical properties I have been impressed by the fact that the most active as well as most efficient salt of gold is the bromide. It not only acts powerfully when administered alone, but seems to increase the therapeutic effects of arsenic and of mercury, and for that reason much smaller doses of these agents may be given, better results obtained, and, at the same time, security from toxic effects will be secured. These are the qualities which recommend the preparations mentioned above, which are true chemical combinations and not empirical mixtures.

It may not be inappropriate to mention a few cases from practice illustrative of the good effects of gold preparations in diseases of the skin and in syphilis:

Case I.—Miss F. B., a dark blonde of seventeen years, has been suffering from a marked pustular acne for two years. She is very nervous in disposition. Vlemingkx's lotion ordered applied at night, and resorcin ointment every morning. In addition, the pustules were emptied thoroughly every day. Some little improvement showed itself, but it was not stable. A "nervous" attack would cause the eruption to manifest itself in a marked relapse. After two months of this treatment, with variations of the external measures, she was placed on ten drops of arsenauro three times a day. In one week the eruption had disappeared, and now, after a lapse of two months, no lesions have appeared.

Case II.—Miss B. R., a blonde of eighteen years, states that she has been suffering from a papular acne, with comedones, since she was thirteen years of age. Free incisions of the papules, together with a sulphur ointment locally, failed to procure any decided effects until arsenauro was used. Her face is now perfectly smooth and clear and downy.

Case III.—Miss M. P. was suddenly attacked by an intense pruritus, accompanied by a mild form of ichthyosis. The ordinary antipruritic solutions did not allay the itching. The peculiar form of pruritus, together with the ichthyotic condition (not congenital), pointed to a central origin of nervous nature. Added to the antipruritic solution was arsenauro, administered in ten-drop doses before each meal. Improvement set in almost immediately, and at the end of three weeks the patient was cured. This occurred despite the fact that the trouble had lasted about a month before I treated her, and despite all the local treatment which she had been given.

Case IV.—C. R., a man of about sixty years, has suffered from general pruritus for several years. At the time he applied for treatment he was emaciated and haggard from loss of sleep due to the obstinate itching from which he suffered. He could only rest after complete exhaustion, and even then sleep was not only not enjoyed, but lasted for the briefest period only. He presented many of the symptoms of neurasthenia. An antipruritic lotion, to be applied three times daily, and arsenauro, in fifteen drop doses before meals, have markedly ameliorated his condition. He bids fair to make a complete recovery in a short time.

Case V.—Miss M. Z., a girl of twenty-four years, has been troubled with a rosacea involving almost the entire face for a period of four years. She is of a markedly neurotic temperament, and her skin will become congested visibly if she gets excited in her conversation. The best reducing agents used externally have had but little influence upon the cutaneous affection. Her stomach was not in order, the trouble being, apparently, so-called nervous dyspepsia. Bearing in mind the close relationships between rosacea and gastric disorders, she was ordered five-drop doses of arsenauro before meals in addition to local applications. Marked amelioration of the gastric and dermal symptoms appeared, and now she is practically cured.

Case VI.—Miss H. L., a strong, stout girl of seventeen years, has suffered for a long time from urticaria. A close examination of her case shows that she is intensely susceptible to nervous perturbations. She complained of slight gastric crises at times, which disappeared spontaneously, but were always accompanied by a marked urticarial eruption involving the entire integument, including the scalp. While an antipruritic relieved the condition temporarily, internal measures failed to procure relief until fifteen-drop doses of arsenauro were given and diminished gradually to ten drops three times a day, until the condition was relieved. This relief has now lasted for four months with no indication that the disease will recur.

Case VII.—Mrs. B. H., an old lady of fifty-seven years, had been troubled with a marked case of eczema for a number of years. Her chest, back, arms, and thighs, as well as abdomen and breasts, had been the seat of a most intensely itching papular eczema for years. Her forearms and legs were affected with the squamous form of the same disease, the folds of the elbows and the popliteal spaces presenting marked fissures. Constipation which existed was relieved by the acid aperient mixture, and an antipruritic lotion followed by a menthol ointment partially relieved the patient. After a time the condition remained in *statu quo*. As no improvement would appear, she was placed on ten-drop doses of mercauro three times a day, and the dose increased until she took twenty drops at a dose. Improvement was noticeable to such a degree that in one month no traces of the eczema appeared. She was continued on the remedy for two weeks longer, and has remained well ever since, a period of about four months.

Case VIII.—Mr. C. H., an old gentleman of eighty-two years, was troubled with marked eczema of a squamous nature localized upon the backs of his hands. Being placed upon the same treatment as Case VII, much more rapid results were observed. He has had numerous relapses, however, due to the fact that he will handle mortar and similar irritating substances, including frequent washing of the hands. A strict adherence to injunctions, however, is always followed by a rapid return to the normal. Of course, water externally is always prohibited in these cases of eczema.

Case IX.—Mr. A. F., a young man of thirty-two years, applied for treatment for undefined pains in the head and swellings of the forefinger and thumb of the right hand, on the left ramus of the jaw, and over the right clavicle. He had contracted syphilis some five years before. He was given mercauro in fifteen-drop doses, to be increased five drops every week until thirty drops were taken thrice daily, or until vertigo declared itself, when the remedy was to be discontinued for a time. Marked effects for the better declared themselves long before the thirty-drop doses were taken. These latter had to be discontinued after a week on account of the vertigo which declared itself. The swellings, however, had gone down, the backache and headache had disappeared, and the patient slept quietly and was refreshed, something he had not known for a year previously. He resumed the treatment after a rest of two weeks and feels strong and buoyant instead of weak and melancholic.

Case X.—Mr. O. W., a married man of forty-three years, contracted syphilis about two years and a half ago. The condition remained unrecognized for about six months. He then applied to me for treatment. His symptoms disappeared rapidly under active mercurial treatment, followed by the mixed. I lost sight of him for about a year, when he applied for a relief of a bursa of the left knee which had been cut open by a surgeon. It returned, and he was advised an elastic knee-cap and placed upon mercauro in twenty-drop doses three times a day. The bursa gradually reduced, and the patient, deeming the elastic bandage sufficient, discarded the medicine. The effusion began increasing, and he quickly resumed the mercauro, and I had the satisfaction of observing the effusion entirely disappear. This patient indulged in increased doses which brought on vertigo. This symptom disappeared, however, upon resuming the original quantity. So far as any other syphilitic symptoms are concerned, they are not evident, and the patient feels both cheerful and contented.

These cases have been roughly outlined so as not to weary the reader. They are what might be called sample cases from a large number of similar ones which have terminated favorably under the influence of the gold preparations mentioned. One feature which has been particularly noticed in connection with mercauro is its marked aphrodisiac properties. While only male patients have mentioned this, no doubt the female ones experienced similar sensations or exhilaration. This latter has been alluded to by a number of patients of both sexes. There is no doubt in my mind that the bromide of gold is the most efficient salt of the metal, and it appears to exercise a two-fold effect therapeutically —namely, it increases the action of the arsenic and mercury with which it is combined, and at the same time it seems to prevent the manifestation of toxic symptoms. It is itself very efficient, if we are to believe competent authority, which states positively that bromide of gold is thirty times as efficient as the other bromides.

So far as the preparations mentioned are concerned, they are efficient and rapid in action and the manifest effects of the gold are evident. An exact dosage by means of measuring the drops is obtained and ease of administration is secured, no disturbance of the stomach resulting from their ingestion. The vertigo which is experienced disappears as soon as the dose is diminished. I have had no occasion to observe aurism up to the present. In fact, I have seen none but the good effects of these gold preparations. One point, however, must always be borne in mind. The indications presented must be such as demand gold. Some of the older writers maintained that gold was the remedy for syphilis, whereas it is only in the later and deeper manifestations that its good effects are shown. Furthermore, gold and its preparations will not have good effects in all skin diseases, but will prove a most valuable adjuvant in such as have a distinct neurotic base as an etiological or complicating factor.

It is the hope of the writer that the few clinical notes jotted down above may serve as a stimulus to further inquiry into the therapeutical worth and more extended application of gold and its salts, as it is a matter of interest and possibly of the greatest importance, more especially in the treatment of many chronic affections of viscera and organs.—A. H. Ohmann-Dumesnil, A. M., M. D., in *The New York Medical Journal.*

COMPARATIVE VALUE OF THE COD-LIVER OIL PREPARATIONS.

THE various diseases of the respiratory and other organs, so prevalent in this climate and in this season of the year, constantly suggest to the practitioner the various preparations of cod-liver oil.

Whatever may be the verdict regarding the other reconstructives, the outcome of practical experience is an increased confidence in their action and curative properties, so that each year is marked by the appearance of new preparations having this substance as a pharmaceutical basis.

Out of the embarrassment of riches it is difficult at times to make a judicial selection. The various emulsions containing no cod-liver oil whatever have latterly become more or less popular. They undoubtedly possess curative properties of a high degree, especially in cases of acute and subacute catarrh of the respiratory and other mucous membranes. In fact, they often prove themselves of greater therapeutic value in these conditions than the oil itself.

The numberless emulsions of cod-liver oil are presumably of increased value by reason of their palatability, more or less perfect emulsification and the addition of the hypophosphites or other alteratives, and digestants. The attainment of the two last conditions implies the addition of glycerine, gum or other substance and a diminished percentage—say fifty—of the food in question. Although a very expensive mixture, it occupies an important place in the treatment of cases marked by impaired digestion and sensitive stomach. Theoretically the minute subdivision of the oil globules should render them more easily assimilable, yet we suspect that this result is in great part attributable to the diminished quantity thus administered, for under proper conditions the gastro-intestinal secretions are quite well able to emulsify a due amount of oil and convert it into a form easy of absorption.

It may be that the hypophosphites herein contained are of much value, yet we have never been convinced of their utility. Even were we assured of their absorption, the amount contained in the ordinary emulsion would seem quite insufficient to secure practical results. The addition of some digestive agent in place of these would in our opinion greatly enhance their medicinal virtues. Instead of this, however, it is doubtless true that the oil prior to its conversion into an emulsion, is sometimes subjected to treatment for the removal of its unpleasant properties.

For the reasons above noted, many have advocated the use of pure cod-liver oil as the ideal form for administration. But even here we are confronted with many and diverse preparations, each of which is supposed to possess peculiar and decided curative properties. There are many grades of such oils, from the standard and reliable preparations like Burnett's, which have not been subjected to chemical manipulation, down to those which are colorless and almost asteless and from which have been abstracted many important ingredients. It s more than probable that the curative properties of cod-liver oid lie not in the il itself, but in the leucomains and crystallizable substances which enter nto its composition. Hence, we may feel confident that in the best grades of ure and unmodified oil we are giving the best, and, provided the patient can ssimilate it, the one which will give the most satisfactory results.

Experience has shown that no remedy possesses so wide a field of usefulness s this and that its value is dependent upon certain active principles existing in the same. Hence, it is very important that the physician should know just what he is administering and should be able to familiarize himself with the exact composition and mode of preparation of the oil or compound which he prescribes.—John J. Berry, M. D., in *The New England Medical Monthly.*

MEDICAL MELANGE.

A PARABLE.

A CERTAIN man was hanged, that he died, and he left two sons, honest men. Now, one of these sons was a blacksmith; but the other became a physician. And after their father had been taken from them, these brothers made their homes in other lands. And the blacksmith would have prospered, but it befell that one asked him how his father made end. And the blacksmith, looking angrily upon him, answered: "He was hung." For the blacksmith was an honest man. Howbeit, presently, when a horse was missing, men gathered and hanged the blacksmith, saying: "This man must take after his father." So the blacksmith did take after his father; but whether he caught up with him the tale telleth not. And, at the same time, in his own city, one inquired of the physician by what means his father died. And the physician covered his face and wept. But whilst he wept, he considered, saying within himself: "If I say, 'he was hanged,' then shall I shock this man, and give him pain. Nevertheless I must tell the truth." He said, therefore: "My father died of heart failure." And again he wept, the questioner weeping with him. Then, this being told, men said: "Doubtless, since his father died of heart failure, this good physician and loving son hath made study of kindred diseases." So they resorted unto him. And the physician became a specialist, and he looked at them who came in and coughed once and sneezed twice, and demanded $100. And they gave gladly. For the physician was an honest man.

CHLOROFORM DANGEROUS TO MEAT EATERS.

THE geographical distribution of accidental deaths from chloroform is peculiar, says a writer in *The New York Medical Journal.* Practitioners favor chloroform in the southern United States, in Egypt and in India, while in London and the northern United States they dislike it. There has been a marked increase in the deaths under chloroform administered during the last few years in Great Britain. During these years the feeding of the population has been changed to an enormous extent by the increase in meat eating due to the importation of low-priced refrigerated meats. Edinburgh has been an exception to the rule that the physicians of the colder cities do not prefer chloroform, but latterly the deaths from its use in that city have been more frequent, and gout has become less rare, both of which results may be due to the much increased use of butcher's meat. A Russian observer has found that if the urine contains alkaloids, trouble may be expected from the administration of chloroform. This may explain why the cases which give the most trouble usually occur in strong, healthy men, who have been on a full diet, and are thus likely to have stored in their tissues a quantity of such alkaloidal products as result from meat eating. These substances, accumulating in the blood during anesthesia, may act as a poison to cause heart failure, while chloroform, administered in the ordinary manner, tends to paralyze the respiratory center before the heart is weakened.—*Practical Medicine.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

A FEW LIVING ISSUES AFFECTING THE HISTORY OF MEDICINE, AND WHAT CAME OF THEM.*

By DONALD MACLEAN, M. D., LL.D., Detroit, Michigan.

The patriot poet of Scotland, Robert Burns, recalling the aspirations of his ardent young manhood, immortalized one of them in these simple but eloquent lines:

> "A wish (I mind its power),
> A wish that to my latest hour
> Shall strongly heave my breast;
> That I for poor auld Scotland's sake
> Some usefu' plan or book could make,
> Or sing a song at least."

By simply substituting the larger term, Humanity, for the poetical and romantic one, Scotland, in this stanza, we have a sentiment appropriately expressive of the real motive which brings us together to-day.

The annual meeting of the American Medical Association occurs at the brightest and sweetest season of the year and in most congenial surroundings. It never, as far as my recollection of its meetings extends, has failed to prove an occasion of delightful interchange of fraternal relations between its members, as well as a season of practical advantage to all sorts and conditions of men, influencing, as it does, for the highest ends, innumerable interests, and shedding rich blessings upon humanity wherever sickness is to be healed, vice to be cured, life to be saved, or good to be accomplished. If the present occasion proves any exception to its predecessors, you will readily believe that my most earnest ambition is that this may consist in the fact that its endeavors shall be greater and its results more valuable than those of any previous meeting. So far as the surroundings and associations of our present place of meeting are concerned, we are indeed highly favored.

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*The President's Address delivered before the American Medical Association in Baltimore on Tuesday, May 7.

The members of an association interested in matters medical, philosophical, humanitarian, that could fail of being uplifted and inspired by the atmosphere and genius of this beautiful classical city of Baltimore, with its more than imperial halls of learning, its ideal and palatial hospitals, and beautiful charities, its world-famed scholars, philosophers and leaders of thought, must have reached a stage of indifference and lethargy painfully suggestive of that hopeless form of degeneracy known as "paretic dementia."

In the presence of this great and learned Association and in the midst of such impressive scenes of scientific and professional suggestiveness, it is with no little hesitancy and timidity that I invite you to accompany me in a brief and inevitably imperfect retrospect, having reference to what I have designated as "A Few Living Issues Affecting the History of Medicine, and What Came of Them."

My purpose is to recall, briefly, certain questions which in their day received the active and interested attention of the profession, and of scientific and thoughtful people. In doing this, I shall confine myself to the period of my own professional cognizance, namely, the forty years last past or thereabouts.

For some years immediately preceding and immediately following the beginning of my professional life, the attention of science and of medical thought was directed toward that renowned center of medical and general learning, my own alma mater, Edinburgh. A glance at the names which at that time constituted its medical faculty will explain this. They were SYME, SIMPSON, JOHN HUGHES BENNETT, JOHN GOODSIR, ROBERT CHRISTISON, LYON PLAYFAIR, MR., now SIR, WILLIAM TURNER, who is the only one still remaining of that brilliant galaxy of teachers and philosophers. PLAYFAIR still survives, but many years ago he abandoned academic pursuits and devoted his life and great abilities to statesmanship, being now a member of the House of Lords, a distinction rarely attained by a member of the medical profession.

Such a faculty could not fail to attract interested attention. While it is well known that at Edinburgh a vast amount of extremely valuable work was, in these days, accomplished in all departments of medical science, still there was, in that far-famed school, one man and one question toward which, from every quarter of the civilized world, eager anticipations were directed. This man was JAMES YOUNG SIMPSON, and the question was, "The use of chloroform as an anesthetic." Having caught the essential idea of relieving pain by the inhalation of ethereal vapors, from this country, SIMPSON, with the energy and courage of his great nature, devoted all his eloquence, ingenuity and literary acumen to the development and final establishment of the new doctrine. How he succeeded we now know full well.

SIMPSON and his followers advocated the tremendous innovation of administering chloroform, not only in surgery, but to suffering woman in her time of sorest need. The proposition aroused a tempest of opposition from all sides, not excepting the pulpit. All the unreasoning conservatism, not only of Great Britain but of the civilized world, was concentrated and arrayed against SIMPSON and his allies in this movement. He was maligned by his professional brethren, discredited by the general public, and anathematized by certain parties in the church. All experience was against him, all theory was adverse to the proposed innovation in practice. The Bible even, that messenger of peace and good will, was hurled at his devoted head and he was advised to read the sixteenth verse of the third chapter of Genesis and ponder it in his heart:

"Unto the woman he said, I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children and thy desire shall be to thy husband and he shall rule over thee."

To all his antagonists SIMPSON presented a brave and undaunted front. To all their arguments he opposed counter arguments, which eventually settled the dispute advantageously to humanity and creditably to him. Asked by a high dignitary of the National Church of England on what authority he presumed to contravene the original curse pronounced against the woman, he amply replies by calling attention to the closing verses of the second chapter of Genesis, which he claimed to be the true and authentic record of the first instance of the use of anesthetics, by which a precedent was established for all similar emergencies:

"And the Lord caused a deep sleep to fall upon ADAM and he slept, and he took one of his ribs and closed up the flesh instead thereof."

The propriety and wisdom of using chloroform in labor is happily not now regarded as a *questio vexata*, although my own belief is that it is not now used as frequently or as generally as it ought to be. I heartily agree with those who administer it in the trying stages of *every* case of labor. SIMPSON contended for its judicious use in cases of *puerperal*, *infantile* and other convulsions. So far as my own observation and experience go in this class of cases, it stands to-day the most valuable and reliable means of immediate relief. On calm and deliberate reflection is it possible, I ask you, to overestimate the courage, the determination and the fine scientific faith of him who, in the face of such tremendous odds, fought to a triumphant issue this great battle for science and humanity. If the annals of medical history furnish an equally brilliant example of well earned and priceless victory, I am at a loss to know where it is to be found.

Before leaving this subject it seems no more than fair to prefer a claim for a considerable degree of honor for one of SIMPSON's patients who proved also to be a powerful ally. I allude to a certain illustrious lady who, reposing sublime confidence in her medical adviser, and influenced we doubt not, by the consideration that the weight of her example must forcibly affect the great question at issue, did not falter in her brave determination (although every conventional influence opposed, and the great ecclesiastical organization of which she was and is the temporal head, held up a warning finger to restrain and deter her) of becoming a party to so startling and revolutionary a proposition. Gently but firmly pushing aside these and other influences, she gave the whole world a lesson, in the exercise of a reasonable and well grounded confidence in "*her doctor*," by submitting herself to the new and as yet almost untried obstetrical expedient, thereby instantaneously determining once for all the happy and victorious solution of this great and burning scientific issue, upon the everlasting and invincible grounds of truth and righteousness. What reason and argument and strong contention well-nigh failed to accomplish, the brave action of a confiding and gentle woman made easy and certain. For this act of royalty may we not in all sincerity exclaim, "God save the Queen!"

In the year 1859, while I was a second-year student in the Edinburgh Medical School, the controversy connected with the introduction of anesthetics had barely been concluded when the scenes shifted, and immediately the movement of another great act in the drama of scientific progress began. For the scenes and acts of this mighty drama are continuous and unceasing. In it there is neither interruption nor interlude; on it the curtain is never rung down. In this year, Darwin's work, entitled "The Origin of Species," appeared in London, and as we look back and contemplate the effect of this book we are forced to admit that it constituted a turning point in the history of science. It appears now as if by its means the spectators were permitted to behold a new and hitherto unimagined and unimaginable view of the long sought for secrets of nature, making many things intelligible which, previous to that time, had been wrapped and hidden in that impenetrable and sepulchral vestment, "mystery." Like the wand of the magician it shed new light and inspired fresh hope along every highway and byway of scientific endeavor. Slowly but surely, men have come to see that Darwinism and the allied theory of evolution constitute the greatest and most radical living issue affecting the scientific thought of the last forty years. It is but a modest and feeble statement of the nature and extent of its claims, to affirm that the fundamental and far-reaching conceptions of Darwinism have forcibly and permanently affected every department of medical thought. By their influence every department and every fact of the marvelous and beautiful drama of scientific evolution has acquired a new and greater significance.

It would be impossible, within the limits of this review, to particularize the luminous influences which have proceeded to every department of science, all of which had their origin in Darwin's great generalization. Foremost among these was one of profound biologic significance affecting all our previous conceptions of heredity. Heredity must always remain a prime factor in the etiology of disease. A correct conception of that in which it consists would appear to be indispensable for the comprehension of pathologic processes. Manifestly, if Darwin's law were true and if the acquirement of variations by means of natural selection was the cause of modification in the organism, not only must heredity be the cause of permanence in organic types, but it must also be upon transmission of beneficial variations that racial devolopment is dependent.

These conclusions gave rise to a renewed application of the laws of heredity to medical science. Embryology became a matter of deepest significance. Teratology took rank as a science. Reversions in type began to be intelligible, strange growths were no longer viewed with wonder as *luses naturæ*, as sportive attempts of nature to accomplish something strange, but were studied carefully with an eye to their comparative classification. The Cohnheim theory of tumors arose, attributing to residual fetal cells a malign potency even greater than the doctrine of pangenesis would justify. The influence of Darwin on medicine can scarcely be exaggerated. Where is a better pathology of hernia to be found than in the "Descent of Man?" Notice how fertilizing an influence it brings to the study of obscure diseases. Doctor Hector McKenzie, in his recent studies of Graves' disease, finds the cardinal symptoms of this disease, "tachycardia," "exophthalmos," "enlarged thyroid" and "muscular tremor" to be those of extreme terror. Darwin's explanation of the symptoms of terror is very suggestive. Men, during numberless ages, have endeavored to escape from their enemies or danger by headlong flight and violent struggling. Such exertion will have caused the heart to beat rapidly, the nostrils to dilate, the breathing to be hurried and all other symptoms of extreme physical effort, the final result being prostration, pallor and relaxation of muscles. "And now, whenever the emotion of fear is strongly felt, though it may not tend to any exertion, the same results tend to reappear through force of inheritance and association." If we imagine this condition of terror to become prolonged by failure of the nervous system to regain its balance, we then have a more or less complete picture of GRAVES' disease. Thus GRAVES' disease may be the expression, by the unconscious memory of the individual, of some shock in an ancestor. Nature has indeed a long memory. When she remembers her past so well, are we not arrogant in calling expressions of it "unconscious?"

While alluding to the influence of DARWIN, especially through the doctrine of heredity, it would be wrong not to call attention to another sweeping generalization which must profoundly influence medical thought. The theory of heredity propounded by PROFESSOR WEISSMAN, of Freiburg, may be said to have arisen out of DARWIN'S work largely though being a negation of some of DARWIN'S conjectures. WEISSMAN'S theory seeks to explain what no doctrine of heredity has hitherto accounted for—how a single microscopic cell can reproduce parental characteristics, and frequently characteristics of grand-parents or remote ancestors. DARWIN'S doctrine of pangenesis was never felt to be entirely satisfactory. WEISSMAN'S theory of the "continuity of the germ plasm — the inference of the practical immortality of the germ plasm," the explanation of variation by means of natural not acquired selection, and the admission that a man resembles his parents, not because he acquires by transmission these characteristics, but because *he* as well as *they* arise out of the same germ plasm, these are conclusions which, if ultimately substantiated are bound to influence and modify our conception of disease and its processes most profoundly.

Those of us who can recall the birth and growth of this new philosophy, those of us who have been privileged to note the ever increasing influence of its teachings and methods on all our modes of thought, not only in the fields of abstract science, but in physiology, pathology and practice of medicine, not to mention other fields of effort, are fully persuaded that whether or not this may be set down as a live issue which has been finally and definitely estimated and disposed of, no more vital and far-reaching one has ever affected our views of natural processes or our methods of reasoning, whether as philosophers, scientists or practitioners of the healing art than this one so modestly and withal fearlessly set forth in the unpretentious volume entitled, "The Origin of Species," published in London in 1859.

Contemporaneously, or nearly so, with the important issues referred to, we find another which, involving interests of the utmost importance was, from its nature not so capable of prompt demonstration, thus furnishing cause of argument and disagreement for a number of years. I refer to the striking revolution in the theory and practice of medicine which resulted in the abandonment of blood-letting and all concomitant so-called antiphlogistic expedients on which the profession has so confidently and comfortably anchored its faith from time immemorial. The change came gradually but certainly. It was useless to deny the fact of the therapeutic reformation, and it was a fundamental and beneficent one. The discussion and the disagreement was as to the why and wherefore of the change. One explanation ingeniously asserted was that the type of disease had changed and that as a result the treatment had to be modified and made milder and more merciful in order to conform to the new and more innocent character of the attack. Other explanations have been given, but it would be a waste of time to recall them. The fact remains that about the time that I and others equally inexperienced were inhaling our earliest draughts of scientific inspiration under the guidance of the great authorities already mentioned, these eminent men themselves were passing through a radical and complete change of belief and of practice. Whatever obscurity may pertain to the various steps and moving causes of this reformation we, from the vantage ground of our present position, are able to look back and with calm judicial fairness recognize the actual truth as to how it was brought about. It was no mere chance, no experimental haphazard change of fashion, no mere product of climatic or meteorologic influences; on the contrary, it was the rich and well earned reward of intelligent, earnest and persistent study and observation, carried on in the spirit created and bequeathed to the scientific world by **John Hunter** and others of his type. Among the notable names associated with this issue, not one, in my opinion, stands higher than that of **John Hughes Bennett** who, studying and intelligently interpreting the fundamental and essential phenomena of irritation and inflammation as seen by the microscope in the web of the frog's foot, the bat's wing, and other translucent tissues, had the genius and courage to turn his knowledge thus acquired to practical uses and discarding the ancient and accepted sheet anchors of antiphlogistic treatment, blood-letting, calomel, antimony and so forth, determined to give the *vis medicatrix naturæ* a fair chance. Supplementing nature's efforts by mild and supporting methods he succeeded in vastly reducing the mortality of pneumonia. And what was even more important he persuaded the whole professional world to pause and reflect. By imitating his methods of observation and reasoning, the profession, in the true spirit of scientific modesty yielded more implicit honor to nature and to nature's powers and methods of healing. In the accomplishment of this impressive transformation scene in the drama of scientific medical progress, the leaders of thought on this side of the Atlantic, to their honor be it said, furnished prompt, intelligent and effective assistance. This is one of those living issues, one of those stirring and inspiring acts in the drama of scientific progress, the happy accomplishment of which I and my contemporaries have been privileged to observe and take some part in at least. In close and rapid succession we encounter other issues to be enumerated in this review.

In the humble office of a poor and unknown physician in Alabama, and almost simultaneously in a small and comparatively limited and insignificant ward of the royal infirmary of Edinburgh, initial arrangements were wisely made in all scientific modesty and earnestness for the ultimate presentation of a marvelously important and beautiful scene in the great drama of practical medical science. In other words, by **J. Marion Sims** on this side of the Atlantic, and **Simpson** on the other, with the support and assistance of their immediate allies and associates, the science and art now known as gynecology was conceived and rapidly matured. From very insignificant and unpromising beginnings this science has certainly, as we all know, increased and grown and, in short, passed through an almost miraculous process of evolution. Although some of its claims may be extravagant and some of its methods objectionable, and its condition as a whole capable of improvement and refinement, we are bound to claim for it a most exalted and honorable position among the living and successful issues which have contributed to render memorable that portion of the great history of medical progress with which we are now concerned. For the vast amount of blessing it has afforded to suffering women let us give sincere and heartfelt thanks. For any failures or blemishes with which this modern child of noble origin may be tainted, let us cherish the hope that these will at no distant date disappear by a gradual process of elimination and evolution.

In this retrospective view of living issues in medical thought, it would be impossible to overlook the important and inspiring one comprehended under the name of "the cellular pathology." With this page in the history of our science, the great name of VIRCHOW will always be inseparably associated, as its founder and greatest advocate. Based on this great teacher's amazing and fascinating discoveries and deductions, a kind and degree of sanguine expectation was induced in the minds of many people, eager and perhaps too willing to believe that here at last the key-note of all pathologic speculation had been struck, that the solution of all the mysteries of the origin and nature of tissue degenerations was within their grasp, that in the tersely expressed principle "*Omnis cellula e cellula*" was comprehended the master key by which all the hitherto tightly locked avenues of pathologic truth were to be made an open sesame. It may be possible to look back and perceive that this confident expectation, was to a great or less extent, misplaced and doomed to disappointment. It cannot be denied that there are even yet, in spite of the cellular pathology and all that has come after it and through it, a good many very deep and dark mysteries still unsolved in the domain of pathology. And yet is there an individual here present, is there a member of our profession anywhere who is not willing to pay sincere and loyal homage to the cellular pathology for its own sake, as well as to its immortal founder and his school for all that it made possible in the advancement of pathology, as well as biology generally?

My old friend and classmate, MR. LAWSON TAIT (to whom, in common with my professional brethren everywhere, I am always ready to acknowledge a vast debt of gratitude for the eminent services which he has rendered to our profession and to humanity) has ventured to speak in terms of sarcasm and contempt of the cellular pathology. He tells that when he entered the profession everybody was "mad after a new cell," and he adds, "a cellular pathology grew up which was to explain everything." The implication is obvious that everybody *did not* succeed in finding a new cell and that the cellular pathology did *not* explain everything, all of which is no doubt only too true. It is incomprehensible (to me at least) that MR. TAIT can believe or that he can expect other intelligent students and thinkers to believe that the cellular pathology of VIRCHOW and his school does not stand out to-day as one of the most inspiring and beautiful features in the history of medical effort and thought in this age.

To say the very least, it constituted in its day a stepping stone of the most vital and critical necessity, without which the onward and upward march of pathologic and biologic progress must inevitably have been grievously delayed and embarrassed. MR. TAIT or anyone else who presumes to sneer at or belittle this product of VIRCHOW's genius writes himself down in my opinion on a plane with the illiterate and unesthetic bucolic immortalized by WORDSWORTH in the well known lines:

> "A primrose by the river's brim
> A yellow primrose was to him
> And it was nothing more."

PASTEUR, TYNDALL, LISTER; the mention of these three names, familiar wherever the rays of modern civilization have penetrated is, I am sure, all that is necessary for the purpose of introducing here the ever fresh and all important "living issue" known as the "germ theory of disease."

It would be little short of impertinence for me to inflict upon you any extended dissertation on this great issue, in regard to which such ample facilities have been furnished for enabling every individual to obtain the fullest knowledge from which to form an intelligent opinion as to the precise value of this theory to practical medicine and surgery. This, at all events, will be freely conceded, that from the time of HIPPOCRATES down to the present moment, the history of medicine will be searched in vain for another instance of the application of scientific facts and observations to medical theory and practice secured by patient untiring effort that can for a moment be compared with this one. Starting with PASTUER'R abstract, and so far as practical medicine and surgery are concerned, we might almost say, aimless experiments and observations, like a photographic negative, gradually but beautifully it has developed and grown, until the whole theory of the healing art has come to be thoroughly modified and colored by its influences.

It was undoubtedly the inspiration derived from the Darwinian doctrine of the struggle for existence, ultimately securing the survival of the fittest, that gave new significance to the studies which had begun with PASTEUR, and whose relation to surgery had been so splendidly demonstrated by LISTER in a series of brilliant and conclusive experiments in 1865. If life from its abstract standpoint were a conflict in which the fittest survived, how much more so was the concrete and organic life the scene of a perpetual warfare with those insidious foes, the microbes. It is not possible here to trace the growth and development of the new science of bacteriology which we know has revolutionized the science of surgery, modified the art of surgery and subverted our deepest and most fundamental pathologic beliefs. So essential has this science become that to-day we regard no young practitioner as thoroughly equipped for surgical work who is not something of an expert bacteriologist. It is out of the study of bacteriology and microbic pathology that modern medicine is slowly but certainly evolving one of her supreme triumphs. Hitherto the immunity to attacks of small-pox conferred by vaccination has been an isolated and incomprehensible fact. JENNER's discovery has been a witness to the value of empiricism in medicine. In harmony with no theory, explained by no logical device, vaccination has by its own inherent virtue proved the value of *undiscorered theories*. To-day a meaning is given to the word "immunity" such as was never before known. A great hope animates the noblest of professions, that in all the so-called zymotic diseases, immunity may eventually be conferred and the most disastrous agencies of human destruction may be deprived of their malignity through the sublime genius of man.

It would be impossible to discuss at length the various theories of immunity, nor can I venture to attribute the degree of truth pertaining to each. To designate the particular rôle of the phagocyte in the competitive struggle graphically described by METSCHNIKOFF — to decide whether the organism generates its own bactericides, or whether the so-called antitoxins and alexins are the product of certain suicidal tendencies on the part of the bacteria themselves — these are secrets which the laboratory is effectually disclosing. Some one has said, a man confronts his own worst enemy as he looks in his mirror, and it may be that the bacteria themselves are their own worst enemies. That while they are causing commotion within our bodies, they are really engaged in the work of self-destruction. However this may be, the recent experience of the profession in the antitoxin treatment of diphtheria, a treatment the introduction of which the Health Officer of New York already admits has lessened the death-rate from that fell disease forty per cent., indicates that after the lapse of many years vaccination for small-pox is not to stand as an isolated fact in medicine. Every fact has some relation to all other facts. "For a blade of grass to grow all nature must coöperate," says DIDEROT. If immunity can be given in one disease it certainly can in others. If there be one event that can accentuate this meeting in the memory of those who honor it with their presence it will, I firmly believe, be due to the fact that to-day we, as a profession, stand on the threshold of one of the most beneficent discoveries medicine has ever made. A discovery whose consequences will transcend those of any other in the increase of happiness it will ultimately bring to mankind.

In any attempt to review the living medical issues of the last forty years, it would doubtless be expected that reference should be made to the all-important one of medical education, a subject in which my own humble endeavors have been intimately involved. My first course of lectures in a medical college was given at Queen's University, Kingston, Ontario, in the session of 1864–65, and from that time to the present the question of medical education has been a theme of vital thought and earnest ambition. In this country, in Great Britain, on the continent of Europe, everywhere, there seems to have arisen about that time a wonderful awakening to a new and better dispensation in the methods and principles of medical teachings.

The Edinburgh school led by SYME, BENNETT and GAIRDNER, profiting by lessons derived from the great French teachers of that day, and from MOTT and his contemporaries in this country, inaugurated a reform which soon spread in every direction. This reform consisted mainly in abandoning the ancient and time-honored method of aiming to impart efficient medical and surgical training by that dreary and painful device "the didactic lecture," supplemented by text-books whose orthodoxy and reliability were estimated chiefly by their antiquity and exhaustiveness. Gradually methods have become more practical, clinical, demonstrative. Place side by side a medical college announcement of 1865 and one of 1895 and the contrast will be astonishing and commendable for the profound and radical improvement sustained. The mighty impetus given to medical pursuits which resulted from the experiences incidental to our great civil war culminated in the establishment of medical schools in unnecessary profusion in nearly every state. The immediate effect on the requirements for graduation of this feverish activity with its concomitant rivalry constitutes, we must admit, a rather unpleasant subject of reflection. Time and force of circumstances have gradually tended to adjust this error, and the standard of medical graduation in the majority of our schools to-day is something of which we may all be reasonably proud. I should, however, be untrue to my oft-reiterated convictions if I hesitated to mention here one cause of complaint still justly chargeable to a considerable number of our American colleges. It is summed up briefly but truthfully as follows: some of these institutions claim to supply to their alumni complete courses and means of instruction; the fact is that one-half of them are shamefully deficient in clinical resources and facilities, while the other half are no less devoid of the men and the means necessary to do anything approaching to justice in teaching fundamental branches, without which a reliable and intelligent knowledge of surgery and practice of medicine is an impossibility. It has long been a settled doctrine with many people that the highest duty, as well as the material interest of these unilateral medical colleges, demand that they mutually agree that the efficient half of each shall be made more and more efficient and that the feeble and farcical one be suppressed or transferred to that institution which may be best able to do justice to the subjects under dispute. Some such mutual combination is essential if in the continued maintenance of these two classes of medical schools they are to be purged of the sin and shame of false pretenses.

In the rapid evolution and growth noted in medical education, it has seemed to those most closely concerned that the time has arrived when a united and determined effort might be made to establish a well-defined plan which would secure uniform coöperation in remodeling the whole system of medical graduation, thus securing for the various designations of "doctor," "surgeon," "physician" and so forth an intelligible and definite signification. This, in my opinion is "a consummation devoutly to be wished."

I have thus far aimed to recall briefly a few living issues in medical thought which have had the most far-reaching influence upon the practice of medicine and surgery during my career as an humble student and worker in that great and honorable army, whose duty and glory consist in its efforts to save life and relieve pain. If my presentation of these "issues" seem to you incomplete and imperfect, I ask you to consider the vastness of the subject and the impossibility of doing it more than partial justice in the time at our disposal. On every hand, issues of the most tempting and impressive attractiveness press forward in one's thoughts and demand at least honorable mention, but the limit must of necessity be drawn with arbitrary decisiveness in accordance with the inevitable and relentless rapidity of movement of the shadow on the sun-dial. That the few topics which our limited time has permitted us to pass in review have been essentially fundamental in their relations to all the others will be freely admitted. That these are sufficiently important to give honor and distinction to the epoch in which they occurred no one will deny. And during this epoch is it not true that in every civilized country under Heaven, vast legions of men have been constantly maintained for very different aims and purposes than those which have engaged our attention? Think for a moment of the incalculable expenditure of energy of every kind which has been devoted to the maintenance and equipment of those vast standing armies whose business it is to—

"March to the drum beat's roll.
The loud-mouthed clarion's bray,
And bear upon their crimson scroll,
Our glory is to slay!"

Turning from the contemplation of these "marshalled hosts" and the death and destruction for which they are maintained, is it not a pleasant relief to direct our attention to such a peaceful and beneficent retrospect as that furnished by the labors and achievements of our profession? Is it not more pleasing to recall the quiet sublime efforts of our own contingent in the great "unending column" of life, that army which

"Moves in silence by the stream,
With sad yet watchful eyes
Calm as the patient planets' gleam
That walks the clouded skies.

"Along its front no sabers shine,
No blood-red pennons wave;
Its banner bears the single line:
'Our duty is to save.'"

To sustain and improve this practical and genuine army of salvation, ought to be the living and moving ambition of every individual and every association. The United States Government maintains a standing army of at least 20,000 men thoroughly equipped and trained, for the purpose of destroying the lives of persons who are supposed to be inimical to its welfare. It leaves to us the responsible and laborious duty of maintaining and equipping, to the best of our ability, a vastly larger and more expensive army of medical soldiers whose functions are infinitely more numerous, intricate and vital than those of any military organization. The functions of this army are not only to contend with the enemies of human life and happiness and in so doing to suffer, ofttimes, hardships and privations, but unlike the great army of contention and bloodshed, it is also our duty and pleasure to love, cherish, uplift and save.

Ours is an army which so far has had to be self-sustaining and independent; an army which, in respect to all the attributes and qualities of the soldier and philanthropist has no reason to shrink from comparison with any association of men in the world's history. To many persons, myself among them, it has for some time appeared that the recorded and recognized results of our achievements give us the right to insist that the peaceful but brave, resolute and progressive army, known as the medical profession, should receive from the people and the government of this country a practical and official recognition which would afford a fair opportunity for the adequate application of the principles of medical science to the needs of the community.

A National Bureau of Health, superintended by a competent medical authority who shall be a member of the Cabinet, could not fail to secure for the nation, benefits beyond the language of dollars and cents to express. A united and dignified effort on the part of this association and its allies ought to secure this enactment. The vast importance of such an act is obvious to the members of this association, and our imperative duty, as it seems to me, is to impress the active and public-spirited statesmen, who guide and control the affairs of the nation, with the essential truth and value of our views. The very respectable problems of foreign policy which have, in recent times, engaged the attention and elicited the energies of our law-makers seem to sink into insignificance in comparison with the great and benign proposition here presented.

It is my deliberate opinion that the establishment of a Bureau of Health, as an integral part of the nation's executive, will prove an effective instrument in promoting the public welfare. It will be the means of unifying efforts in the suppression of dangerous diseases. It will afford opportunity for restraining the effete despotisms of the old world from adulterating our population with the vicious and degenerate. It will be a means whereby this enlightened and progressive republic may exemplify, to the world, the true mission of medical science. It will offer another agency for disseminating the truths of scientific discovery; another means of discriminating between that which is transitory and accidental in medical achievement and that which is permanent and immutable; and will furnish another promise that medicine in the future shall in no wise be unworthy of her past traditions.

The party, professional or political, which shall succeed in consummating this wise measure will assuredly earn for itself the gratitude and applause of an appreciative nation. The individual citizen who shall materially contribute to the success of this noble "*useful plan*" will be justified in congratulating himself on having realized the lofty aspiration of the patriot, as well as the sublime and pathetic "wish" of the poet: "*Homines deos accedunt hominibus dando salutem.*"

RABIES—HYDROPHOBIA.

By THEODORE R. MacCLURE, Lansing, Michigan.

[Published in The Physician and Surgeon exclusively]

[Concluded from page 164.]

PASTEURISM.

Since the establishment of the Paris Pasteur Institute for the preventive treatment of hydrophobia, many institutes and laboratories have made preparations to give the treatment, until to-day such institutions are so numerous, and conveniently located as to be accessible to all. To my knowledge they are now located in Paris, Saint Petersburg, Odessa, Vienna, Moscow, Constantinople, Milan, Naples, Lisbon, Barcelona, Bucharest, Cochin China (at Sagon), Mexico, Havana, Tunis, Padua, Kharkof, Budapesth, Stamboul (Turkey), Buenos Ayres, Rio de Janerio, Turin, Calcutta and, last but not least, in New York and Chicago.

Early in the year effort was made toward the establishment of a Pasteur Institute at Simla, India, not only for antihydrophobia inoculations but for the systematic and specialized investigations into the causation and prevention of various diseases. The movement has been received with much favor. Donations, government grants and subscriptions from individuals and municipalities have been made, and the government has promised the services of a capable medical official. It is probable that the institute is now in working order.

In April of this year the British Institute for Preventive Medicine made application to erect a Pasteur Institute at Chelsea, England. There was some objection by the residents of Chelsea, claiming that it would not only depreciate the adjoining property, but would be a possible source of infection. The institute has been commenced and although the building proper is not yet completed work is being pursued.

It is announced that antihydrophobia stations are soon to be established in various cities of Turkey, among which are especially mentioned Yemen, Bagdad, Damascus, Erzeroum, and Monastir.

IN PARIS—M. PASTEUR, Director.

Since JOSEPH MEISTER was treated antihydrophobically many thousands of people have undergone the inoculations at the Paris PASTEUR Institute. The following table will give you the results during the years 1886–1893:

Years.	Persons treated.	Deaths.	Death-rate per cent.
1886	2,571	25	0.94
1887	1,770	14	0.79
1888	1,622	9	0.55
1889	1,830	7	0.38
1890	1,540	5	0.32
1891	1,559	4	0.25
1892	1,790	4	0.22
1893	1,648	4	0.24
Total	14,330	72	0.50

PASTEUR has established a custom of dividing the cases into three classes, namely:

(A) Those bitten by animals proved to be rabid, by laboratory experiments, or by the death of other persons or animals bitten by the same animal.

(B) Those bitten by animals recognized by clinical or veterinary examination to be rabid; and

(C) Those bitten by animals supposed to have been rabid.

These rules have been generally followed out in the statistical results of PASTEUR Institutes.

	A			B			C		
Year	Number treated.	Died.	Mort'lity per cent.	Number treated.	Died.	Mort'lity per cent.	Number treated.	Died.	Mort'lity per cent.
1886	223	5	2.15	1,931	24	1.24	518	7	1.35
1887	357	2	0.56	1,161	15	1.29	260	4	1.54
1888	403	7	1.74	974	4	0.41	248	1	0.40
1889	348	4	1.15	1,188	9	0.25	298	3	1.00
1890	385	0	0	960	3	0.95	223	0	0
1891	313	0	0	967	7	0.72	313	2	0.64
1892	139	1	0.72	1,052	3	0.29	609	2	0.33
1893	111	0	0	937	7	0.75	497	2	0.40
	2,279	19	..	9,170	72	..	2,966	21	..

Of the 1,648 treated during 1893, 178 came from places outside of France; 43 from Spain; 35 from Greece; 23 from England; 22 from Belgium; 18 from Egypt; 14 from British India; 9 from Switzerland; 9 from Holland; 6 from Portugal; Germany and Turkey, 2 each; and Austria, United States, Brazil, Russia and Morocco, one each.

Since the foundation of the institute, no fewer than 14,330 have been treated by the PASTEUR method in Paris. Of these 1,213 (16 fatal cases) were bitten on the head, 8,032 (45 fatal cases) on the hands, and 5,185 (11 fatal cases) on the limbs.

In August, 1884, in the absence of M. PASTEUR, DOCTOR ROUX replying to an inquiry, stated that nothing had yet been done in preventing the development of hydrophobia in human beings infected with the disease. Contrast this statement of DOCTOR ROUX with a statement that he would have been able to make at the close of the year 1893, when 14,330 persons have been treated with a mortality of only 0.50 per cent.

The statistics of the Paris Institute show that the majority of cases of hydrophobia occur between the months of February and May.

AT TURIN, FRANCE.

During the period from September 30, 1886, to September 30, 1893, there have been treated a total of 1,738 persons, with 8 deaths, or a mortality of .46 per cent.

IN NEW YORK—DOCTOR PAUL GIBIER, Director.

NEW YORK PASTEUR INSTITUTE.*

[See foot note on page 207.]

Statistics of the Preventive Treatment against Hydrophobia since its opening—from February 18, 1890, to January 1, 1895 (nearly four years):

		A			B			C		
Bites inflicted on the head and on the face.......	simple, .		7	18		6	9		17	33
	multiple,	5	11		..	3		..	16	
Cauterization	*efficacious*....	..	..	..	..	..	..	..	..	..
	non-efficacious,	7	..	..	..	..	..	9	..	..
No cauterization..................		11	..	..	9	..	..	24	..	..
Bites inflicted on the hands	simple,......		64	113		58	100		63	113
	multiple,....	..	49		..	42		..	50	
Cauterization	*efficacious*....	2	..	..	1	..	..	1	..	..
	non-efficacious,	49	..	..	40	..	..	47	..	..
No cauterization..................		61	..	..	59	..	..	65	..	..
Bites inflicted on the limbs and on the body	simple,......	..	21	44	..	23	38	..	50	69
	multiple,....	..	23		..	15		..	19	
Cauterization.......	*efficacious*,...	..	..	..	1	..	..	3	..	..
	non-efficacious,	28	..	..	15	..	..	30	..	..
No cauterization		16	..	..	23	..	..	36	..	..
Clothes torn		11	..	..	14	..	..	5	..	..
Bites inflicted on bare parts.......		3	1	1	9	..	..	6	5	5
Bites inflicted on different parts of the body....................		..	..	12	..	..	10	..	..	11
Cauterization	*efficacious*,....	1	..	..	..	..	..	1	..	..
	non-efficacious,	4	..	..	4	..	..	8	..	..
No cauterization		8	..	..	6	..	..	7	..	..
Clothes torn		1	..	..	1	..	..	4	..	..
Bites inflicted on bare parts........		9	..	..	4	..	..	9	..	..
				188			157			231
					576					

Of the 576 persons treated during the period from February 18, 1890, to January 1, 1895, there were only four deaths, or a mortality of 0.67 per cent. In *The New York Therapeutic Gazette*, for September, 1894, DOCTOR GIBIER exhibits some very interesting tables. One table shows that 40 persons who were bitten by dogs which bit and caused the death of other animals, were treated successfully. Another table shows where 24 persons who were bitten by dogs whose bite caused the death by hydrophobia of some other persons, were treated successfully. In one of these cases four men, in another three men and a child, in a third a woman and a child and in the rest of these cases one person, all subsequently died of hydrophobia.

Of the 85 persons treated in 1893, 26 were bitten by animals proved to be rabid, 11 by animals recognized by clinical or veterinary examination to be rabid, the remaining 48 were bitten by animals suspected of rage.

AT ODESSA, RUSSIA—DOCTOR BUIVID, Director.

During the year 1890 there were treated at Odessa 727 persons (443 males and 284 females). Among this number 257 were children of 10 years or under.

In 649 cases the animal causing the bite was a dog, in 43 a cat, in 6 a horse, in 4 a wolf, in 3 an ox, and in 3 a pig.

In 201 cases the animal causing the bite was proved experimentally to be rabid, in 10 by death of other animals bitten at the same time, in 261 by post-mortem examination, in 251 by symptoms evinced by the animal, and in 4 it was uncertain.

In 120 cases the wounds were severe and on uncovered parts of the body, in 485 moderately severe, in 103 slight (having been inflicted on the limbs through thick clothing).

In 524 cases the persons presented themselves for treatment within a week after the bite, in 122 cases within two weeks, in 44 within three weeks, in 14 within four weeks, and in 4 a month or more after the bite.

Classified by months of the year, they were as follows:

Months.	Persons bitten.	Months.	Persons bitten.	
January,	34	July,	117	
February,	40	August,	91	
March,	59	September,	40	
April,	84	October,	43	
May,	76	November,	35	
June,	82	December,	31	
Total	375	- - - -	357	732

The duration of treatment was in the majority of the cases three weeks. The total number of persons who underwent the complete treatment was 704, with 9 deaths, or a mortality of 0.71 per cent.; of these 4 died during the treatment, and 5 after its completion.

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* The column A refers to persons bitten by animals in which hydrophobia has been evidenced by experimentation or by the death of some other persons or animals bitten by them; column B to persons who have been wounded by animals having been recognized rabid by the clinical or veterinary examination; and column C to cases in which hydrophobia could only be suspected, as the animals had disappeared or were killed instantly and their bodies thrown away.

At the Odessa Bacteriological Station, during the year 1893, there were treated 793 persons. Of those who had passed through the treatment, and could be said to have died in spite of the preventive inoculations, there were two deaths or a mortality of only 0.26 per cent. However, 4 of the 793 delayed in commencing the inoculations, and died during the treatment and cannot be included in the deaths. If these four were included the number of deaths would have been 6, and the mortality would have been 0.76 per cent. Of the 793 persons admitted for treatment, 83 were bitten by animals proved experimentally to be rabid; 253 by animals pronounced rabid after veterinary or post-mortem examination; 439 were bitten by animals suspected of rage; and 18 were persons who had been subject to the danger of contagion while attending sick persons or animals.

Classifying these persons according to age, 96 were under five years of age, 161 from 5 to 10, 211 from 10 to 20, 231 from 20 to 40, 74 from 40 to 60, and 20 were over 60 years of age.

In 5 cases the animal causing the bite was a wolf.
In 710 " " " " " " " " dog.
In 56 " " " " " " " " cat.
In 2 " " " " " " " " calf.
In 1 " " " " " " " " pig.
In 1 " " " " " " " " horse.

In 18 cases there was possibility of infection while tending sick persons or animals.

AT BUDAPESTH, HUNGARY—PROFESSOR HÖGYES, Director.

From April 15, 1890, to April 14, 1891, the number of persons subjected to the protective inoculations was 701, of whom 8 died of hydrophobia, giving a mortality rate of 1.14 per cent.

From April 15, 1891, to April 14, 1892, there were treated 540, of whom 3 died, giving a mortality of 0.58 per cent. The average mortality for the first two years (April 15, 1890, to April 14, 1892) was 0.88 per cent. Of the 1,241 persons treated 130 had been bitten on the head, face or neck, of these 3, or 2.30 per cent. died, of 486 bitten on the hands 7, or 1.64 per cent. died, and of 625 bitten on the foot or on the trunk, only 1, or 0.16 per cent. died.

Official statistics of the Hungarian Government show that of those who were bitten during these two years, who either did not apply for treatment, or applied too late for successful treatment, the mortality was 26.8 per cent. When this mortality rate is compared with the rate among those treated in time, the difference bears striking testimony to the efficacy of the protective inoculations.

During the year ending April 14, 1893, there were 641 persons treated, with 6 deaths or a mortality of 0.93 per cent. during the third year of the Institute. In the second year the mortality was 1.16, and in the first it was 0.56. During the three years ending April 14, 1893, there were 1,350 persons treated with 13 deaths, or a mortality of 0.91 per cent. Experience showed that the largest number of cases occurred in June, July, and August, and the least in November. The total number of persons who died of hydrophobia in all Hungary during the same period was 103.

AT MOSCOW, RUSSIA—DOCTOR GOLDENBACH, Director.

The statistics for the year 1892 show that 907 persons were treated, of whom 613 were males, and 294 females. Of the 907 treated, 178 were bitten by animals proved to be rabid, 439 by animals pronounced rabid after veterinary or post-mortem examination, 290 by animals probably rabid.

In 769 cases the animal causing the bite was a dog.
In 45 " " " " " " " " wolf.
In 70 " " " " " " " " cat.
In 11 " " " " " " " " horse.
In 8 " " " " " " " " cow.
In 2 " " " " " " " " pig.
In 2 " " bite was caused by a human being.

Of the 907 treated, 6 died notwithstanding the treatment, giving a mortality of 0.66 per cent.

From June 25, 1886, to June 25, 1892, there have been inoculated a total of 3,961 persons.

AT RIO DE JANERIO, BRAZIL—DOCTOR AGUSTO DOS SANTOS, Director.

From the opening of the institute (February 9, 1888) to June 30, 1892, 1,149 persons presented themselves for treatment, but of this number 473 persons were for various reasons rejected. Of the remaining 676 there were 511 males and 165 females; 105 were treated in 1888, 90 in 1889, 158 in 1890, 242 in 1891, and 81 in 1892.

In 505 cases the bites were inflicted on uncovered parts of the body, and in 171 on covered parts of the body, but the animal's teeth had penetrated the clothing.

Cauterization was performed effectually in 34 cases, ineffectually in 392, and there was no cauterization in 250 cases.

The animal causing the bite in 613 cases was a dog, in 52 a cat, in 2 a mule, and in 1 a horse. In the remaining number the treatment was applied because of probable accidental infection while attending the sick persons or animals.

In 6 cases the bite was on the head, in 236 on the hands, in 131 on the arms, in 201 on the legs, and in 29 on the trunk. In 10 cases the patient had been bitten on different parts of the body.

In 80 cases the animal causing the bite was proved experimentally to be rabid, in 287 the animal was recognized rabid because of its symptoms, and in 300 cases the symptoms of the animal were so suspicious as to make it probable that the animal was rabid.

Of the total (676) commencing the inoculations, 15 for various reasons discontinued the treatment, leaving 661 who completed it. Of these 661 only 7 died, giving a mortality of 1.05 per cent.

During the period between February 9, 1888, and August 14, 1889, there were 150 persons treated. Of this number 141 were bitten by dogs and 15 by cats. In 19 cases the animal causing the bite was found to be mad, in 67 cases the animal was recognized by clinical or veterinary examination to be mad and in 70 cases the animal was supposed to be mad.

From February 9, 1888, to May 19, 1894, there were treated 1,147 persons, with only 9 deaths, or a mortality of 0.78 per cent.

AT SAIGON, COCHIN CHINA—DOCTOR CALMETTE, Director.

From April 15, 1891, to May 1, 1892 (first year of the institute), 48 persons were treated. In 16 of these cases the animal was proved to be rabid, and in all other cases confirmation of the virulence of the bite was received before treatment was commenced. Of the number treated during this period, 16 presented themselves on the fifth day after being bitten, 4 from the tenth to the twentieth, 6 from the twentieth to the thirtieth, and 1 on the fortieth day. In spite of the long delay before commencing treatment, only one patient died. In all cases the "intensive method" was used.

Between May 1, 1893, and May 1, 1894, there were 49 treated, with two deaths, one of these deaths occurred immediately after the completion of the treatment.

At this institute the natives are treated at the public expense, and every native bitten by an animal known to be rabid or strongly suspected of rabies, is immediately sent for treatment.

During the twelve months ending May 1, 1893 (second year), there were 62 persons treated, with 1 death, or a mortality of 1.61 per cent. In 12 cases the animal causing the bite was proved, experimentally, to be rabid, and in the other 50 cases the diagnosis was made clinically on the statements of veterinarians; and, in some cases, on the statement of civil or military officials. The dog was the cause of the bite in all instances except one, when the biter was a man suffering from hydrophobia.

Since the establishment of the institute (April 15, 1891) to May 1, 1893, there were 110 persons treated, with 2 deaths, or a mortality of 1.81 per cent.

AT PADUA, ITALY—DOCTOR GIOVANNI, Director.

During the last seven months of 1890, DOCTOR GIOVANNI had treated 49 persons with no deaths. Twenty-three of these were bitten by animals proved experimentally to be rabid, 18 by animals recognized by clinical or veterinary examination to be rabid, and in the remaining 8 by animals in which rage was only suspected. In all the patients the bite had drawn blood, and in nearly all the wound was on an exposed part of the body, in 30 cases the bite was on the upper limbs, and in 2 the bite was on the head. Three months after the last treatment in 1890 all patients were reported healthy.

In the year 1891 there were 57 persons treated, and in 1892 there were 48. No death occurred in either year.

AT BUENOS AYRES, ARGENTINE REPUBLIC—DOCTOR D. J. DAVEL, Director.

The institute at Buenos Ayres was the first of its kind in North or South America, and the fifth in the entire world. The first inoculations were made September 4, 1886, in the presence of a distinguished assembly, composed mostly of medical men and students. From September 4, 1886, to September 6, 1894, there were 1,981 cases treated, with 14 deaths, or a mortality of 0.70 per cent. The following are the facts for the several years:

Years.	Number treated.	Deaths.	Death-rate per cent.
1886	19*	0	.00
1887	77	1	1.29
1888	236	1	.42
1889	259	5	1.93
1890	254	3	1.18
1891	285	1	1.35
1892	313	0	.00
1893	327	2	.61
1894	211†	1	.47
Total	1,981	14	0.70

Of the 14 fatal cases one person sought treatment 36 days after receiving the bite, several delayed 26 days, one 12 days; and, considering these long delays, the great fatality cannot be attributed to the inefficiency of the method of treatment. Again, in some of the 14 cases death was not produced exclusively by rabies, but other serious complications, and the gravity of the bite, were causative factors.

In 683 cases the animal causing the bite was proved, experimentally, to be rabid; and of these only 4 died. It is estimated that thirty per cent. of these 683, or 204 persons, would have died had they not presented themselves for the treatment. Of the total number treated (1,981) there would have resulted, at the same ratio, 594 deaths.

Of the 825 persons treated during the period between September, 1886, to December 31, 1890, the mortality among those bitten by animals proved, experimentally, to be rabid was 2.74 per cent., among those in which the animals were recognized by veterinarians to be rabid 0.85 per cent., and among those bitten by animals suspected of rage it was 0.59 per cent.

AT BUCHAREST—PROFESSOR BABES, Director.

At the meeting of the International Medical Congress in Berlin (1890) Babes reported that in the Pasteur Institute at Bucharest about three hundred persons are inoculated yearly, with a mortality of about 0.40 per cent. in cases bitten by dogs, most of which were demonstrated to be rabid by inoculation experiments made at the institute.

AT NAPLES—DOCTOR CALABRESE, Director.

From August, 1886, to April, 1894, there were inoculated 1,000 persons. Of this number 291 were bitten by animals proved to be rabid, 486 by animals recognized by clinical or veterinary examination to have been rabid, the remaining 223 were bitten by animals only suspected of rage. The number of deaths was 8, or a mortality of 0.80 per cent.

AT HAVANA, CUBA (BACTERIOLOGICAL LABORATORY)— DOCTOR ACOSTA, Director.

This is reported to have been the first place in the tropics where the Pasteur method was tried. From April 15, 1887, to December 31, 1889, there were 306 persons treated, with two deaths, or a mortality of 0.65 per cent. In the first 105 persons treated no deaths resulted, although they had been bitten by dogs proved experimentally or clinically to have been mad. Notwithstanding some 700 persons applied for treatment during this period, only the 306 were accepted.

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* From September 4 to December 31, 1886.

† From January 1 to September 6, 1894.

AT SAINT PETERSBURG—DOCTOR M. W. KRAIOUCHKINE, Director.

This antirabic station was established July 13, 1886, and was the gift of his Highness, PRINCE ALEXANDRE PETROVITCH D'OLDENBOURG, and was first installed at the Veterinary Infirmary of the Regiment of Horse Guards, but was in 1892 transferred to the Imperial Institute of Experimental Medicine, which institute was also founded by his Highness.

During the five years ending July 13, 1891, 1,256 persons presented themselves for treatment. Of this number 394 were rejected for various reasons and 23 discontinued the treatment, leaving 839 who completed the treatment.

The following table shows, by years, the number treated during the five years ending July 13, 1891:

Years.	Persons treated.
1886 (last six months)	137
1887	200
1888	184
1889	106
1890	142
1891 (first six months)	70
Total	839

Of the 839 persons treated there were 391 men, 192 women, and 256 children (under 15 years of age).

The largest number of persons were bitten during the months of June, July and August. This may, however, be due to the fact that the peasants were the class of people most commonly bitten and the summer months is the season of the year when they pass most of their time in the fields. The following table will classify the bites, by months of the year:

Months.	Persons bitten.	Months.	Persons bitten.	
January,	66	July,	116	
February,	74	August,	88	
March,	62	September,	73	
April,	68	October,	63	
May,	45	November,	56	
June,	92	December,	36	
Total,	407		432	839

The majority of persons bitten presented themselves within one week after being bitten; and, as this is an important factor in the success of the inoculations the following table is presented:

Those presenting themselves within 3 days after the bite,	213
" " " " 1 week " " "	281
" " " " 2 weeks " " "	213
" " " " 3 " " " "	80
" " " " 4 " " " "	37
" " " later than 1 month " " "	15
Total, - - - - - - -	839

In 735 cases the animal causing the bite was a dog.
In 75 " " " " " " " " cat.
In 16 " " " " " " " " wolf.
In 4 " " " " " " " " horse.
In 3 " " " " " " " " cow.
In 6 " " " " " " " " fox.

839

Of the 839 treated, 222 were bitten on covered parts, and the remaining 617 are divided as follows:

Those bitten on the head,	54
" " " " superior members,	487
" " " " inferior "	33
" " " different parts of the body,	43
	617

In 422 cases the animal causing the bite was proved to be rabid, and the mortality was 3.08 per cent.; in 240 cases the animal was recognized by clinical or veterinary examination to be rabid, and the mortality was 1.25 per cent.; and in 177 cases where the animal could only be suspected of rage, the mortality was 3.38 per cent. The general mortality was 2.62 per cent.

The largest number of deaths occurred among those patients presenting multiple bites on the head or other parts of the body. No deaths occurred in the 222 cases where the bite was on covered parts; but, in the 617 cases where the bite was on uncovered parts, there were 22 deaths, or a mortality of 3.56 per cent.

In the year 1892 there were 288 persons presented for treatment. Of this number 66 were rejected for various reasons, and 11 discontinued the treatment, thus leaving 211 persons who completed the inoculations. Of this number 109 were men, 43 women, and 59 children (under 15 years of age).

The following table classifies the bites by months of the year:

Months.	Persons bitten.	Months.	Persons bitten.	
January,	18	July,	15	
February,	9	August,	22	
March,	13	September,	21	
April,	28	October,	15	
May,	19	November,	7	
June,	22	December,	6	
Total,	109		86	195

Those presenting themselves within 3 days after the bite,	25
" " " " 1 week " " "	71
" " " " 2 weeks " " "	63
" " " " 3 " " " "	29
" " " " 4 " " " "	14
" " " later than 1 month " " "	9
Total, - - - - - - -	211

In 181 cases the animal causing the bite was a dog.
In 17 " " " " " " " " cat.
In 8 " " " " " " " " wolf.
In 3 " " " " " " " " horse.
In 1 " " " " " " " " guinea pig } experimental
In 1 " " " " " " " " mouse } animals.

Of the 211 persons treated, 68 were bitten on covered parts, no death occurring. The remaining 143 were bitten as follows:

Those bitten on the head,	16
" " " superior members,	108
" " " inferior "	11
" " " different parts of the body,	8
	143

Of the 211 persons treated during the year 1892, three died, giving a mortality of 1.42 per cent.

AT VIENNA—PROFESSOR PALTAUF, Director.

Antihydrophobia inoculations are being given at the Rudolph Stiftung Hospital at Vienna. The inoculations are performed daily between 10 and 11 A. M. At present there is no charge for the treatment, but it is understood that the charge for such treatment is now under consideration.

Preventive inoculations have been given by DOCTOR ULLMANN. In one year 122 persons were treated, within 10 days after the bite, and only 3 died, or a mortality of 2.46 per cent. During the same period several others were bitten by the same dog causing the bite of some of the 122 treated. These persons did not undergo the treatment and have since died.

AT CHICAGO—DOCTOR A. LAGORIO, Director.

During the period between July 2, 1890, and February 9, 1894, 366 persons were treated, and are classified as follows:

Of the total number treated 104 were bitten by animals recognized to be rabid by experimental proof, or by death of other persons or animals bitten by the same animal; 126 were bitten by animals recognized to be rabid by the symptoms of the disease; and 72 were bitten by animals strongly suspected of rabies.

Dogs caused the bite in 341 cases, horses in 9, cats in 7, skunks in 5, wolves in 2, a mule in 1 case, and a pig in 1 case.

Two deaths were reported among the above mentioned patients, giving a mortality of only 0.54 per cent.

In 123 of the cases the animal causing the bite was proved to be rabid, in 160 the animal was recognized to be rabid by the symptoms of the disease shown during life, and in 83 cases the animal causing the bite was strongly suspected of rabies.

Besides the 366 persons who were treated, 372 others were rejected for various reasons.

[DOCTOR LAGORIO records the case of a five-year-old boy, a subject t epilepsy, who, on account of the bite of a dog, was treated at the laboratory in August, 1890, and who has not only never suffered bad consequence from the bite, but recovered from the epilepsy as well. Similar cases and results have been noticed at other institutes, although I believe that DOCTOR LAGORIO claims priority].

AT CALCUTTA, BENGAL—A. REUTER, *Director*.

A PASTEUR Institute was successfully inaugurated on January 30, 1894, in the presence of a large company. After the ceremony subscriptions to a considerable amount were promised.

AT MILAN, ITALY—DOCTOR REMO SEGRÈ, *Director*.

This institute was established in 1890, by subscription from local business houses. During the years 1890 and 1891, 238 cases were treated. Of these 108 were bitten by animals proved experimentally to be rabid (two deaths), 121 by animals recognized by medical men or veterinary surgeons to have been rabid (two deaths), and 9 were bitten by animals suspected of rage (no death). Thus out of 238 treated there occurred 4 deaths, or a mortality of 1.68 per cent.

AT CONSTANTINOPLE, TURKEY—DOCTOR ZOEROS, *Director*.

Between May 1, 1887, and March 1, 1889, 41 persons were treated, with no death resulting. Of these 12 had been bitten by animals proved experimentally to be rabid, 26 by animals recognized rabid by medical men, veterinary surgeons, or other competent persons, and 3 by animals in which rabies was only suspected.

VALUE OF THE DOG.

That there are about three dogs to each family, and many more than is absolutely necessary, is a fact recognized by nearly every citizen in the United States and probably by the great majority of people in the world; however, that species of animal is still being propagated, until to-day the all-important question is "What is to be done with the dog?"

Recognizing the fact that probably nine-tenths of all the cases of hydrophobia are due to the bite of the dog, many ways to prevent the occurrence of rabies have been suggested. One will advocate the muzzling of all dogs, and another will recommend the extermination of that animal. Preventive inoculation of every dog has been suggested; but, as this has not been generally tried, it does not at present seem entirely practicable.

Muzzling is effective when fully enforced, but experience has shown that it is difficult to keep muzzled every dog. It is stated, however, that in Germany where muzzling is generally enforced there are very few cases of hydrophobia.

In cities the system of "catching and killing" stray dogs has proved efficacious indeed and every year there are thousands of stray dogs caught and, if not claimed within a certain period, they are killed by various methods, such as drowning, smothering in a vacuum chamber, killing by poisonous gasses, et cetera. This seems cruel, but something must be done to rid the country of the over-numerous dogs.

While the protection of human beings is of primary importance, there is still another consideration of no slight importance, namely, the destruction of property. It is not uncommon to have it reported that a mad dog has killed or given rabies to such valuable property as horses, cows, sheep, chickens, et cetera, which usually means death to the animals infected. While there are many instances of destruction of stock, the most notable I now have in mind is the outbreak of rabies near Fowlerville, Michigan, in March, 1888. It is reported that one dog caused the death of some six cows, nine horses, and about seventy-five chickens. The dog also attacked two children; but, as the bite was on parts thoroughly covered and there was no abrasion of the skin, the children did not have hydrophobia. Nearly all of the mentioned animals died of rabies. It is of common occurrence to hear of outbreaks of rabies of more or less magnitude occurring in different parts of the world. In fact they are so frequent that it would be useless to try to enumerate them; medical journals and statistics abound with them.

The following table will give a vivid idea of the enormous money-loss by dogs in the state of Ohio for the years 1880–1893. Through the kindness of the Secretary of State's office at Columbus, I have been able to secure, and have tabulated the following facts:

NUMBER AND VALUE OF SHEEP KILLED AND INJURED BY DOGS, IN OHIO, FOURTEEN YEARS, 1880–93; AND NUMBER OF MILCH COWS COMPARED WITH NUMBER OF DOGS, IN OHIO, FOURTEEN YEARS, 1880–93.

	Sheep killed by dogs.		Sheep injured by dogs.			
Year.	No. of sheep	Val. of sheep	No. of sheep	Val. of sheep	Total Number of milch cows.	Total Number of dogs.
1880	28,763	$ 97,277	23,625	$41,671	*	121,656
1881	33,297	122,684	31,609	60,394	*	*
1882	34,606	133,765	31,422	58,748	556,425	*
1883	32,955	122,788	24,814	51,188	556,425	214,794
1884	30,327	104,622	21,685	43,256	576,147	160,072
1885	21,146	85,590	18,807	33,039	579,990	160,018
1886	29,006	82,183	19,484	35,098	595,524	168,398
1887	19,029	84,701	18,283	51,490	580,538	162,809
1888	31,836	107,749	25,296	44,264	610,477	162,644
1889	32,080	103,531	26,152	48,503	619,483	155,446
1890	27,862	100,536	21,823	42,857	595,133	148,409
1891	25,057	94,965	17,705	40,464	613,507	153,892
1892	28,469	107,181	22,040	44,509	612,766	158,142
1893	29,915	107,431	22,840	46,893	600,463	152,764
	403,348	$1,456,003	325,585	$642,374		

The Agricultural Statistics of Ohio for the last ten years show that on an average every year there are about 600,000 milch cows and about 150,000 dogs existing in the state, or about one dog to every four cows. These facts plainly show the prevalence of the dog. The dog is probably as numerous in other states. Considering the comparative value of the two animals, it does not seem possible that citizens of any state will keep an animal which is of so little value, and no small expense, as the average dog. Everyone knows the value of a milch cow, but there are people who would rather part with a whole herd of milch cows than to part with their pet dog even though the dog be the worst kind of a mongrel.

From the foregoing table it will be observed that in the state of Ohio *alone*, during the fourteen years (1880–1893) 404,348 sheep were killed and 325,585 were injured, giving an appalling money-loss of $2,098,377. Supposing such a statement were made for the whole world, and the loss of human life should be included, would not the facts be a powerful argument for *less dog*, less sacrifice of property and less sacrifice of human life?

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* No statistics reported to the Secretary of State.

To counterbalance the immense loss of property and human life every year there is provided in many cities and countries a dog-tax or license which is a revenue to the local funds amounting to millions of dollars. In Chicago the dog-tax without regard to the sex of the animal is two dollars per year, the number of licenses issued each year averaging from 34,000 to 35,000, which means that in Chicago alone there is turned into the city treasury a sum averaging about $75,000 yearly.

Of course the number licensed does not cover all the dogs, because they are "caught and killed," and many are never licensed. I presume a conservative estimate would be that in cities where there is an effective dog ordinance about three-fourths of the dogs are licensed; while in smaller towns and cities about one-tenth would be a fair estimate of the number licensed.

In Detroit the ordinance provides a license of $1.00 for male and $2.00 for female dogs, with an additional ten cents each for the tag. During the four years, 1890–93, there were 8,507 licenses issued with a revenue to the city of $9,574.70. But as Detroit claimed about 250,000 citizens, there ought to have been in the four years at least 75,000 dogs licensed, with a revenue of at least $100,000 instead of only $9,574.70. It is evident that the dog ordinance is not being rigidly enforced.

I am informed that there is no law or ordinance in Philadelphia compelling dogs to be registered or providing for a dog-tax. There is, however, an ordinance requiring all dogs running at large to be muzzled, and if any are found unmuzzled, they are taken up by the "dog catchers" and turned over to the pound-master where they may be redeemed by paying $2.00. If not redeemed they are killed by some kind of gas. In 1891 there were 6,052 dogs captured, and 4,829 were killed; the redemption money paid to the city was $2,128. By paying $1.25 at the office of the Clerk of Quarter Sessions, the owner may receive a life-long registration certificate for his dog which makes the animal the personal property of the owner. This certificate may be transferred by paying the sum of 12 cents. From September, 1860, to November 22, 1894, about 8,519 dogs were registered becoming the personal property of the owner.

In Bavaria from 1863 to 1876 the deaths from hydrophobia ranged from 14 to 31 each year. A striking contrast are the statistics for the first seven years (1883–1889) of the enforcement of the muzzling order which provides for the killing of stray dogs. During this period of enforcement of the order, only three deaths have occurred in a population of five and one-half millions of people.

During the month of August, 1889, the police in London seized 3,290 stray dogs; 47 either rabid or supposed to be were killed on the streets; 19 were proved by post-mortem examination to be rabid; and 1,681 persons were reported to have been bitten by dogs. In May, 1894, the London police captured 2,161 stray dogs, and 148 persons were reported to have been bitten by vicious dogs.

There are reported to be 150,716 dogs in the Seine Department, France. In 1892 the municipal tax was collected from the owners of 130,716 dogs, and in 20,000 the tax was avoided.

A vicious dog may cause his owner a considerable expense as well as trouble. A dog that destroys property may be an expensive pet. In France only a few years ago a man was bitten by a vicious dog from which he received a permanent injury. He instituted an action for damages and the courts awarded him a judgment of 11,000 francs (about $2,500) and ruled that the owner of a dog was responsible for any damages done by the animal.

The dog, and especially the house dog, may be a source of contagium in infectious diseases. The Iowa State Board of Health has recently (September, 1894) reported a death from diphtheria in which the source of infection was traced to a pet dog. Doctor Stiles, of the Bureau of Animal Industry, tells how animal parasites dangerous to man, such as the tongue-worm (*Linguatula rhinaria*) the tape-worm (*Tenia echinococcus*), et cetera, are conveyed to man by way of the pet dog.

RULES AND REGULATIONS SHOULD BE FRAMED AND PUBLISHED.

One of the most efficient means employed for the restriction of the spread of rabies is a set of rules which shall regulate the action, and movements of animals infected with the disease. Each local board of health should frame and publish (in accordance with state laws) rules which would enable the health officer to act promptly upon the appearance of a case of this disease so dangerous to the public health and life. If a health officer is obliged to wait until the local board can be called together, the disease may have been allowed to spread, instead of restricting it to the first case.

On the occurrence of a case of rabies the facts should be reported to the local health officer, and promptly restricted by him in accordance with Act 137, Laws of 1883. The health officer should, in compliance with Sections 5 and 6, Act 125, Laws of 1889, report the fact to the president of the State Live Stock Commission, who at present resides at Stanton, Michigan. The local health authorities should isolate the animal or animals and keep them so, until they are taken care of by the State Live Stock Commission or State Veterinarian; but, under no circumstance should the local health authorities fail to guard the public health and life. Whether in man or animals the full facts regarding the outbreak of the disease should be reported to the Secretary of the State Board of Health, at Lansing.

In cities the "Dog Ordinance" generally regulates the action of animals most likely to be infected with rabies. Every city should be equipped with an efficient ordinance and should demand its strict enforcement. An ordinance may be ever so efficient, but if not enforced is useless, and the stray and ownerless dogs will be permitted to roam about the city to become infected with rabies and transmit the disease to human beings. The following is an ordinance which it seems to me no city would make a mistake by copying:

Be it ordained by the City Council of the City of ....:

Section 1.—Every owner of, or person who harbors or keeps, a dog within the limits of this city, shall report to the City Collector annually, within thirty days after the first day of May in each year, his or her name and address, and shall give the name, breed, color and sex of each and every dog owned or kept by such person, and shall pay to such officer the sum of two dollars for each and every dog, and cause such dog, or dogs, to be registered for license in the office of the City Clerk, who shall furnish the owner or keeper of same with a license tag.

SECTION 2.—Every dog shall be provided by its owner or keeper, with a leather or chain collar, to which a license tag shall be securely fastened, and every dog shall also be muzzled, if so ordered, as hereinafter provided. No dog shall be permitted to remain within the limits of the City of ......, unless the owner, or keeper thereof, shall have caused such dog to be registered and licensed, and provided with such collar and tag, and be muzzled, if so ordered, and any owner, or keeper, of a dog failing to provide such collar, tag or muzzle, if required, shall be subject to a fine of five dollars for every such dog so unprovided, to which fine shall be added, if unlicensed, the amount of the license tax, and costs, if any, incurred.

SECTION 3.—The City Clerk shall keep a complete registry, in a book to be kept for that purpose, of all licensed dogs, describing same by name, breed, color and sex, and shall also enter the name and address of the owner or keeper as given, and the number of the city license tag.

He shall provide, each and every year, such number of metal tags as may be necessary (the shape to be changed each year) having stamped thereon the year for which the tax is paid, the letters .... D. T., and also the number of the tag, and it shall be the duty of the City Clerk to deliver one of such metal tags, number to correspond with the number of the registry of the dog, to the person having paid the tax upon any such dog.

The City Clerk shall also send a duplicate of such registry to the Pound-master, who shall record the same in a book to be kept by him for that purpose, and such record shall be open to public inspection.

SECTION 4.—Whenever the Mayor of this city shall deem it necessary, he shall issue an order prohibiting for a certain time therein specified all dogs from running at large on any street, alley, or other public place, in this city, unless such dog be securely muzzled, or led by a line or chain, so as to effectually prevent them from biting any person or animal, which order shall be published in a daily newspaper of general circulation in the City of ....

SECTION 5.—It shall be the duty of the Superintendent of Police, his assistants, and of all the policemen of the City of ......, to take up and impound in such suitable place, or places, as may be designated by the Mayor (of which place or places, notice shall be given by posting a card or notice in some conspicuous place in the office of the Chief of Police, and in the office of the City Collector, and also by publication, of such place or places, in some daily newspaper of the City of ...., of general circulation, to be designated by the Mayor), any dog found running at large in the City of ...., contrary to the provisions of any ordinance, or of any order issued by the Mayor.

SECTION 6.—The City Pound-master shall, immediately upon receiving any dog at the pound, make a complete registry of same, enter the breed, color and sex, and whether licensed or not, if ascertained, and if licensed, he shall, if known, enter the name and address of the owner or keeper, and the number of the license tag, if any, and shall keep impounded licensed dogs separate from unlicensed dogs.

A list of all licensed dogs impounded, if any, shall be immediately sent to the City Clerk, for entry, by the Pound-master, who shall also forthwith give notice, through the postoffice, to the owners or keepers of such licensed dogs, of their being impounded.

SECTION 7.—For every dog taken up and confined in the dog pound, as provided in this ordinance, for which no license tax has been paid, a redemption fee of three dollars, together with the amount of the tax, shall be paid to the City Collector for the use of the city; and upon procuring a certificate from the City Collector, stating that said amount has been paid, and paying to the Pound-master for taking up such dog the further sum of fifty cents, and the cost of keeping such dog, not to exceed twenty-five cents per day, and cost of advertising, if any, as hereinafter provided, the owner or keeper thereof, within five days after the impounding, or any other person, after five days, shall be entitled to redeem such dog, and if such dog shall not be redeemed within five days after being taken up, such dog shall be destroyed by the Pound-keeper, except that at the expiration of the five days allowed for the redemption of impounded dogs, the Pound-master shall advertise immediately in a daily newspaper of general circulation in this city, all unredeemed licensed dogs, if known or identified as such, and if such dogs be not redeemed at the expiration of the fifth day after such advertising, they shall then be destroyed.

SECTION 8.—Any dog for which a license has been paid, which may be impounded for being at large without collar or tag, or without a muzzle, if required (if it shall be made to appear to the satisfaction of the City Collector by the affidavit of the owner or keeper, or by other sufficient testimony, that a license for such dog was procured, and a collar put around its neck, with license tag attached, as provided in this ordinance, or was muzzled, as required by any order of the Mayor, but that such collar, tag or muzzle has been accidentally lost), may be redeemed upon the payment to the City Collector, for the use of the city, of two dollars, and payment to the Pound-keeper his charges, as provided in Section 7 of this ordinance, and the City Collector may deliver to the person redeeming such dog, a duplicate license tag to correspond with the registry, for which duplicate tag twenty-five cents shall be paid.

SECTION 9.—It shall be the duty of the Chief of Police, or any police officer, to kill any dog which may be found in the City of .... without an owner or keeper, or found at large contrary to any ordinance, or to any order of the Mayor; *Provided*, such dog cannot be safely taken up and impounded, and unless a dog cannot be safely taken up and impounded, it shall not be lawful for any officer of the City of ...., or any other person, to kill, or attempt to kill, any dog at any other place than the dog pound.

No dog shall be subject to molestation under this ordinance, or under any order of the Mayor, while on the premises of its owner or keeper, and any officer of the City of ...., or other person, who shall invade private premises to capture, entice, or take any dog out, of the inclosure of the possessor of such dog, or who shall molest or seize any dog while held, or led by a line or chain by any person, or who shall bring into the city any dog, for the purpose of taking up and impounding the same, shall, on conviction, be fined in a sum not less than five, nor more than fifty dollars.

SECTION 10.—If any fierce or dangerous dog shall be found at large in the streets of ...., or upon any public place, or upon the private premises of any other person than the owner or keeper of the dog, and shall there annoy or endanger any person thereon, the owner or keeper thereof shall forfeit and pay to the City of .... a sum of money not exceeding ten dollars, for the first offense on the part of said owner or keeper, in permitting such fierce and dangerous dog to be at large; and upon a second or further conviction, for the same offense, a sum not exceeding twenty-five dollars; and it may be part of the sentence, upon such second conviction, that such fierce and dangerous dog immediately be killed, and this sentence shall be forthwith executed by the Chief of Police or any police officer, for which killing the owner or keeper shall pay the further sum of one dollar, which sum shall be included in said judgment.

Section 11.—Whenever complaint shall be made and filed with any Justice of the Peace, or Police Magistrate, setting forth that any dog has, in any manner, disturbed the quiet of any person or neighborhood, or has bitten a person within the City of ...., and that the person so bitten was not at the time trespassing upon the person or property of the owner or keeper of such dog, the Justice of the Peace or Police Magistrate, shall issue a summons directed to the Sheriff, Constable or Police Officer, which summons shall be returnable forthwith; and upon the return of such summons the Justice of the Peace, or Police Magistrate, shall proceed to hear and determine the matter, and if it shall appear that such dog has so disturbed any person or neighborhood, or that the person so bitten by such dog was not at the time trespassing upon the person or property of the owner or keeper of such dog, the Justice of the Peace, or Police Magistrate, shall order said dog to be removed or killed, and shall issue an order to the owner, or keeper of such dog, to remove or kill it within twenty-four hours from the time of receiving a copy of such order.

The owner or keeper of any such dog who shall refuse or neglect to remove or kill, or cause such dog to be removed or killed, within twenty-four hours after having received a copy of said order from the Justice of the Peace, or Police Magistrate, aforesaid, shall be fined in a sum not exceeding twenty-five dollars, and the further sum of twenty-five dollars for every twenty-four hours thereafter until such dog shall be removed or killed.

It shall be the duty of any Police Officer, or Constable, to kill said dog whenever it shall be found at large in said City of ...., twelve hours after the service of a copy of said order on the owner or keeper of such dog.

Section 12.—The word dog, whenever used in this ordinance, shall be intended to mean a female as well as a male dog.

Section 13.—All ordinances or parts of ordinances inconsistent with the provisions of this ordinance are hereby repealed.

ISOLATE ALL INFECTED OR SUSPECTED ANIMALS.

For the restriction of the spread of rabies and hydrophobia, it is important that prompt action should be taken with any suspicious animal. When a dog or other animal acts strangely and there is suspicion of madness, the animal should be immediately confined, *not killed*, and kept under observation for a week or ten days. Have the animal examined by a competent physician or veterinary surgeon, and if the animal is rabid the characteristic symptoms will soon be observed. Pasteur says " the animal will certainly die within eight days. If at the end of that time no symptoms of rabies have been observed, the bite cannot cause hydrophobia, and there is no reason why the animal should be destroyed." If symptoms of rabies do appear in the animal thus under observation, it should be immediately killed; and, if the animal has bitten a human being, a small portion of the medulla oblongata should be secured and placed in a small vial containing pure glycerine only, for use in experimental inoculations of other animals to determine without doubt whether the animal suspected of rage was really rabid.

If other animals have been bitten by a suspicious animal, they should likewise be confined until it is proved whether or not they are rabid, or until the period of incubation* has past. It is quite frequently the case that valuable stock has been bitten by animals not rabid, and it would be a useless destruction of property to dispose of such animals. Do not kill an animal unless you have good reason to believe it is rabid, or unless it is a source of danger to other animals and to human life. Of course a dog may run mad when it is quite impossible to secure the dog, and extremely dangerous for it to run at large, where shooting the animal may be the only safe way. In such a case the animal should not be disposed of until it is absolutely certain that no person has been bitten. If a person has been bitten a portion of the medulla should be prepared as described above. If a human being has been bitten and the animal is destroyed there is no way left to ascertain whether or not the dog was really mad, and whether the person bitten has been inoculated with the virus of a terrible disease.

WHAT SHOULD BE DONE WITH A PERSON BITTEN.

It is important that prompt measures be taken for the care of the patient. The wound might be "sucked" and thoroughly cleansed with a large effusion of hot water, at the same time pressing the wound to cause any liquid, poison, et cetera, to ooze out and to promote bleeding. A solution of boric acid would promote bleeding and aid in cleansing the wound. If the wound is on the leg or arm a bandage might be placed between it and the heart. As soon as possible cauterize the wound. There are many cauteries recommended, such as caustic potash, nitrate of silver (lunar caustic), carbolic acid, bichloride of mercury,† match of Paquelin, et cetera, but as these cauteries, with the exception of the lunar caustic, cannot well be used except by a physician, the white-hot iron will probably be most available in all cases, especially in places where the physician is not accessible. Where a physician can be called without much delay, it is best to leave to him the method, and cautery to be used. Very little time should be lost, however, in calling a physician, because immediate action is important and the most effective cauterizations are those performed within half an hour. The hot iron can be used by a non-professional person, while the other cauteries require more care in their application.

Cauterization may or may not be effective in destroying the poisonous virus; but surely, in most cases, will do no harm, and may be the means of preventing an attack of hydrophobia. Most people believe, as does the illustrious PROFESSOR KEEN, that there is "no treatment that will prove effective in cases of hydrophobia except that of PASTEUR." PASTEUR preventive inoculations have been described on preceding pages of this paper.

The PASTEUR treatment can be secured from two central points in the United States; one in New York City, at the corner of Central Park and Ninety-seventh street, and the other in Chicago, at 65 Randolph street. The New York Institute is under the directorship of **Doctor Paul Gibier**, and the Chicago Institute is directed by **Doctor A. Lagorio**. The statistics on preceding pages of this paper will show the results of the work of each institute.

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* For period of incubation in animal see page 159 of The Physician and Surgeon.

† The bichloride of mercury should not be used stronger than 1 to 500.

The cost of treatment is small compared with the value of a human life. I understand that the charge for the treatment alone is ordinarily $200.00, which does not include the expense of living during the period of treatment, which lasts about 15 days.

When it is proposed to send a patient to a **Pasteur** institute it should be remembered that it is important to send at the same time the piece of the medulla oblongata prepared in the vial of pure glycerine only.

If the person suspected of being infected is himself able, or has friends who are financially able, the problem of securing the treatment is not great. But when the patient or his friends are not able the problem is not so easy, and the question is—

HOW CAN THE TREATMENT BE SECURED?

In Michigan there is a law which provides that the local board of health shall see that no person sick or infected with a disease dangerous to the public health shall suffer for want of nurses or other "necessaries," which certainly implies that no person is to suffer for want of medical attendance; and, as long as it is recognized that **Pasteur**'s inoculations is the only known treatment, no person should be permitted to suffer for want of that treatment. This same statute provides that the expense is chargeable to the county in cases where the patient or the patient's friends are not able. It is not at all improbable that the expense of the **Pasteur** treatment might be chargeable to the county in such cases.

In Great Britain and especially in Scotland the municipality has sent many patients to the Paris **Pasteur** Institute; and in some cases has gone so far as to furnish a medical attendant to accompany the patient. This plan could be employed in the United States.

There is still another way by which the necessary funds might be secured. It is well known that there are many liberal, wealthy men, who are public-spirited, and might loan a patient the money to secure the treatment. Then, again, the funds might be secured by means of the subscription paper so commonly used in the relief of the suffering.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, APRIL 1, 1895.

The President, EUGENE SMITH, M. D., in the Chair.
Reported by LUTHER S. HARVEY, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Steinbrecher read a paper entitled, "Lavage in Diseases of the Stomach."

Doctor Delos Parker: One point the doctor did not mention in his paper is the lubrication of the tube. Oil should not be used. The patient should be instructed to lean forward so as to allow the saliva to flow out of the mouth. I have found the introduction of the tube a very difficult procedure to carry out in private practice. With children it is especially difficult.

Doctor Hitchcock: I agree with **Doctor Parker** in the difficulty attending the introduction of the tube. Not long ago a man of about fifty years and of full habit came to me with gastric dilatation. Lavage was deemed advisable, and the attempt was made. The patient coöperated, but even after the use of cocaine, it was found impossible to introduce the tube.

Doctor Inglis: The cases cited by **Doctor Steinbrecher** are suggestive and show that great results can be achieved. In dilatation we must cut off the supply and give such treatment as is indicated in the case.

Doctor Shurly: I have used the tube a great deal in introducing nourishment. In cases of laryngeal phthisis, where the ulceration is not too extensive, it can be used to great advantage. I endeavor to pass the tube through the upper part of the passage as quickly as possible. It is a good plan to keep the patient blowing to take his attention. Sometimes I have had the food return on account of contraction of the stomach. In advanced laryngeal phthisis the tube should not be used.

STATED MEETING, APRIL 8, 1895.

The President, EUGENE SMITH, M. D., in the Chair.
Reported by LUTHER S. HARVEY, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Manton read a paper entitled, "A Consideration of Puerperal Convulsions."

Doctor Emerson: **Doctor Manton**, in his paper, has very carefully stated the probable cause of eclampsia. I consider it as a variety of epilepsy. The term puerperal eclampsia is a misnomer. Eclampsia of pregnancy would be a better term, since eclampsia occurs long before labor. What is the condition that leads up to eclampsia? The condition is one of abolished inhibition. Whatever takes away the checks of improper nervous force will tend to cause eclampsia. It may be only hysteria which is a cessation of inhibition. I think we shall agree that whether the convulsion is caused by digestive disturbance, or whether it is caused by the teeth or by pressure of the gravid uterus upon the sciatic branches of the nerves, there is a similar condition in them all. We have not only the pressure of the gravid uterus but also, in a vast majority of cases, albuminuria. Retention of the products produces a disordered condition of brain nutrition. Whether this is due to the presence of bacteria in the blood, we do not know. In puerperal convulsions, in the peripheral irritation we have sufficient cause for the cessation of inhibition. We find that a strain upon the nervous system seems to be sufficient to cause a fresh attack. Products of morbid metamorphosis together with peripheral irritation are to be considered the essential etiological factors.

Doctor Carstens: There is, beyond reasonable doubt, a connection between puerperal convulsions and diseased kidneys. Hysterical seizures do not belong to this category. Pressure on the renal veins cannot alone be responsible for the trouble, because it occurs long before the uterus is large enough to press upon them. The statement that many pregnant women have albuminuria is false.

The statement that you have eclampsia without kidney trouble, I likewise doubt. Knowing that as soon as pregnancy ceases, the condition of the kidneys improves and the trouble ceases, I do not see how we can attribute the cause to anything else. There is no palliative treatment. The woman may, at any minute, have a puerperal convulsion and die in it: or she may have a cerebral lesion and become blind or deaf. This condition is a proper indication for inducing premature labor. End labor just as soon as possible. In the vast majority of cases the trouble ceases as soon as labor is induced. Prevent the woman from having any more convulsions by the administration of chloroform and get her under the influence of chloral. Aconite, veratrum viride, morphine hypodermically, bleeding, hot packs, sweats and pilocarpine may be used. No matter when the convulsions occur, they are due to disease of the kidney, and the indication is to induce labor. Every pregnant woman should be under the care of a physician from the time she becomes pregnant.

DOCTOR KNILL: During pregnancy there is a large quantity of excrementitious matter that should be eliminated. When the kidneys are not performing their function, the poison accumulates. If the kidney fails to eliminate, our plan of treatment is pretty well marked out. We must remove the poison. It is a remarkable fact that when the uterus is emptied we get relief. I think that the irritation is caused by the retention of this excrementitious matter, and whatever poison may be in it.

DOCTOR ROBBINS: The theories have been discussed until we hardly know where we stand. The relief of the uterus does not guarantee relief from the convulsions. I do not like the idea that we may use veratrum if we like, aconite if we like, or something else if we like. It seems to me we should have our plans well mapped out. In the first place, relieve the irritation. Examine the woman and find out the condition of the uterus. Apply cocaine to the neck. Then follow with dilatation of the neck and delivery. No half-hearted plan should be adopted. We should act and act methodically.

DOCTOR BRYAN: It has seemed to me that artificial hemorrhage is of great value in relieving this trouble. Where there is a big hemorrhage during labor, the convulsions do not appear. Where convulsions came on, a post-mortem hemorrhage has caused them to cease immediately. All the observations I have been able to make have shown that free bleeding is of great value.

DOCTOR PARKER: I was much impressed with what DOCTOR ROBBINS said: that a man should have a very clear idea as to what he should do in a case of puerperal convulsions. Injuries to the brain are very frequent. In the treatment of a case during gestation, the patient should be put upon a strict milk diet. Tincture of the chloride of iron should be employed. Basham's mixture should be used for its sedative effect on the kidneys. In regard to the treatment at term, blood-letting should be employed to relieve pressure. Pressure within the vessel increases with each convulsion and there is great danger of injury to the brain. Chloral hydrate is indicated in every case. In convulsions before, during, or after labor, take sixteen ounces of blood, give chloral, and induce labor.

DOCTOR MANTON: It was simply with the etiology I had to deal. The fact is when we speak of emptying the uterus, we are removing the source of irritation. I think that convulsions coming on early in pregnancy are due to disease of the kidneys. In cases that come on during the later stages, the trouble is due to pressure. The part played by the kidneys is overestimated. We find the trouble occurring in cases where there is no disorder. As a matter of fact, we find primary changes take place in the placenta and in the liver; edema of the brain occurs also. The whole course seems to show that the secondary conditions are conditions of intoxication and infection. To what this toxic condition is due we cannot tell. I believe the disease is of essentially nervous origin.

EDITORIAL ARTICLES.

THE AMERICAN MEDICAL ASSOCIATION.

THE recent meeting of the American Medical Association is pronounced on all sides to have been one of the most successful known in the association's history. The beautiful city of Baltimore with its historic memories, its magnificent hospitals, and academic prestige, furnished an atmosphere at once favorable to fraternal feeling, and inspiring to scientific thought.

The work of the association was perhaps never of higher quality. The energy and activity displayed in the sections are the most convincing indications of unimpaired vitality. So long as so much work and such good work continues to be done the association will be in the foremost rank, as one of the best instruments in the promotion of professional advancement.

The Rush monument committee is especially to be congratulated. It would really seem that they are about to reap the rewards of their persistency. That they have been persistent enough to make ultimate reward of some kind inevitable goes without saying. If the claims of a common living newsboy to monumental memorial had been urged as vigorously as have the claims of BENJAMIN RUSH, he would probably long ago have been pedestalled above all his tribe. The recent aspersions upon the character of RUSH, and the effect of the letters in which he displayed his animosity to WASHINGTON, seem even to have been overcome by the strenuous eloquence of RUSH's living spokesman, whose efforts certainly entitle him to exclaim "*exegi monumentum in aere perenius.*"

It is admitted on all hands the meetings were presided over by one who exhibited a rare combination of dignity and astuteness. Several minatory propositions were most comfortably dodged, and no changes were made in the code or in the conduct of *The Journal.* Difficulties often settle themselves if given a little time, and peace is felt to be desirable, if it only be in the nature of an armistice.

Michigan men will especially be proud of the address delivered by the president, DOCTOR DONALD MACLEAN. This was listened to with profound attention, and applauded enthusiastically on its completion. The address deals in a scholarly manner with important issues in medical history, and those who had not the privilege of listening to it will be gratified by finding it ready for their perusal in the present number of The Physician and Surgeon.

The Baltimore meeting will long live in the memory of those who attended it, and no better wish can be expressed than that the association may have many more meetings like unto it.

EDITORIAL BREVITIES.

SURGICAL EFFECTS OF RIFLE BULLETS.

THE late war between China and Japan has furnished some positive data as to the effect of the new bullets. In the case of direct hits, the action of the new bullets may be summed up by saying that they produce clean-cut, slightly-lacerated wounds of the soft parts, exert less explosive action and splinter and displace bones less except at short ranges. These wounds present the best conditions for rapid healing with septic complications. At long range these bullets tend to somersault, and then produce extensive splintering and comminution of bone. Altogether the effect of these bullets may be considered desirable in so far as they tend to minimize the horrors of war.

WHITE'S OPERATION FOR HYPERTROPHIC PROSTATE.

CASTRATION as a palliative device fot those suffering with enlarged prostate is undoubtedly gaining adherents. A New York specialist says of it that "a theoretical operation, based upon observations upon dogs and eunuchs, in whom physiological atrophy of the prostate is said to be induced by the abrogation of its sexual function, cannot reasonably be applied with the expectation of getting the same results in elderly men in whose prostates hyperplasia has already taken place," but DOCTOR WHITE points out that it is no longer a theory. Post-mortem examinations have already revealed that the gland after removal of the testes undergoes certain degeneration changes which lead to its conversion into a small, tough and fibrous mass in which there are only remains of the glandular tubules and ducts. The operation as now performed is vouched for by several able surgeons, who all testify to the surprising rapidity in the relief it furnished.

WHAT SHALL BE DONE WITH THE DOG?

THE writer of the admirable and exhaustive article on "Hydrophobia" appearing in this and the preceding number of The Physician and Surgeon raises the important question, "What shall be done with the dog?" A dog census would show the existence of about three dogs to each family. While the dog is often an extremely useful animal, he has his disadvantages. The State reports of Ohio give statistics showing the death of 30,000 sheep, and the injury of 23,000 through the bite of the dog. There is little doubt that he is a potent cause of disease and destruction. The devising of some means whereby the breed of these animals shall be improved is a desirable end to achieve. The dog-tax, although a considerable source of revenue, amounting in a city like Chicago to $75,000 annually, is not faithfully enough collected to render the multiplication of "curs of low degree" a thing to be avoided. The fact that the dog population almost equals the human population makes any effort to accomplish protective inoculation almost impossible.

MEDICAL NEWS.

THE BALTIMORE MEETING.

THE forty-sixth annual meeting of the American Medical Association was a pronounced success. The registration exceeded one thousand, and the general sessions and the section work were ably managed. All proposed amendments to the constitution were indefinitely postponed; Congress was asked to place surgeons in the navy on an equal footing with those in the army; and henceforth the advertisements of medical preparations published in the organ of the association must give the official or chemic name of the product and the quantity of each composing ingredient. The social features of the occasion, embracing receptions, dinners, and excursions, were all that could be desired. The following officers will manage the affairs of the association for the ensuing year: President, Doctor R. Beverly Cole, of California; first vice-president, Doctor J. J. Chisholm, of Maryland; second vice-president, Doctor J. C. Le Grand, of Alabama; third vice-president, Doctor Augustus P. Clarke, of Massachusetts; fourth vice-president, Doctor T. P. Satterwhite, of Kentucky; treasurer, Doctor Henry P. Newman, of Illinois; secretary, Doctor W. B. Atkinson, of Pennsylvania; librarian, Doctor G. E. Wire, of Illinois. Members of the board of trustees: Doctors Alonzo Garcelon, of Maine; I. N. Love, of Missouri, and James E. Reeves, of Tennessee. The following were named as delegates to the meetings of foreign medical societies: Doctors W. H. Daly, of Pittsburgh, Pennsylvania; J. H. Ouchterlony, of Louisville, Kentucky; I. N. Love, of Saint Louis, Missouri; C. G. Chaddock, of Saint Louis, Missouri; L. N. Montgomery, of Chicago; A. E. Rockey, of Portland, Oregon; I. N. Quimby, of Jersey City, and H. H. Biedler, of Baltimore, Maryland. The following will deliver the annual addresses: Surgery, Doctor Nicholas Senn, of Chicago; Medicine, Doctor William Osler, of Baltimore; State Medicine, Doctor George H. Rohé, of Baltimore. The next meeting will be held at Atlanta, Georgia. Doctor W. F. Westmorland, was designated as the Chairman of the Committee of Arrangements, and Doctor J. McFadden Gaston, Jr., as Assistant Secretary.

MICHIGAN STATE MEDICAL SOCIETY.

Do not forget the meeting of the State Medical Society, in Bay City, on Thursday and Friday, May 6 and 7. The meeting is to be a rousing one and will be largely attended.

DEPUTY SURGEON-GENERAL JOHN S. BILLINGS.

Doctor Billings has requested that he be placed on the retired list, the transfer to be made in October next. This change will create a vacancy in the Army Medical Museum, of which he is curator, and in the library of the Surgeon-General's office, of which he is librarian. It is the doctor's intention to complete the final volume of the "Index Catalogue" before severing his connection with the office. It is not to be understood from this official retirement that Doctor Billings will relinquish active work, as his career of usefulness will be prolonged in the capacity of Professor of Hygiene in the University of Pennsylvania.

THE PASSING OF A NOTED PHYSIOLOGIST.

Professor Karl Ludwig, of Leipsic, a physiologist of world-wide repute, died on April 27, at the age of seventy-nine. He was the inventor of the kynographic method for the study of blood-pressure, and the author of a number of works on medical subjects, among them being "The Gas of the Blood;" "The Structural Conditions of the Heart, the Liver, the Kidneys, and other Internal Organs;" and "The Secretion of the Kidneys." Born at Witzenhausen, December 23, 1816, he studied medicine in Marburg and Erlangen, receiving the degree of Doctor of Medicine in 1839. From 1841 to 1846 he held the position of Demonstrator of Anatomy at Marburg, and was elevated to the professorship of Anatomy in the latter year. He was elected professor of Anatomy and Physiology at Zurich in 1849, and in 1855 was called to the chair of Physiology in Vienna. In 1865 he accepted the chair of Physiology in Leipsic, retaining this position until his demise. It is claimed that half the physiology known is attributable to Ludwig and his pupils. During his last moments he expressed these words: "I am satisfied with my life's work and am glad to die."

CLINICAL TEACHING IN THE PROFESSIONS.

THE legislature of California, which recently adjourned, appropriated $250,000 to erect a central building in San Francisco for the professional departments of the University of California, the sole purpose of the grant being to afford students the advantages of the superior clinical facilities conferred by a large city. It would seem that the faculty of the regular medical department of the University of Michigan are incapable of appreciating innovations of this sort as they make no effort to enhance the value of their clinics by removal to the fertile fields of Detroit, notwithstanding that a member of the board of regents recently conceded the propriety of such a scheme before the legislative committee at Lansing by saying that if one professional school were removed to the state's metropolis an incentive would be offered the other schools to follow. However this may be, our homeopathic friends recently determined to sever, if possible, the ties that bound their school to a country clinic, and accordingly introduced a bill into the legislature providing for the removal of the homeopathic college to Detroit. This bill has passed both branches of the legislature. The regular school might have lead in this matter; its future salvation may oblige it to follow.

THE KEMPF BILL FOR THE PREVENTION OF BLINDNESS.

A BILL to provide for the prevention of blindness in the newly born by compelling midwives and nurses to report in writing to the local health officer any redness or inflammation occurring in the eyes of infants under two weeks of age, and to provide a penalty for the neglect of the same.

SECTION 1.—The People of the State of Michigan enact, That should one or both eyes of an infant become inflamed or swollen, or reddened, or should any pus or secretion form in the eyes, or upon the edges of the lids at any time within two weeks after its birth, it shall be the duty of the midwife, or nurse, or other person having charge of such infant, to report in writing within six hours after discovery of such inflammation, redness, or formation of pus or secretion, to the local health officer, or some legally qualified practitioner of medicine of the city, town, or district in which such case shall occur, the fact that such inflammation or swelling, or redness or inflammation of the eyes exists.

SECTION 2.—Any failure to comply with the provisions of this act shall be punished by a fine not to exceed one hundred dollars ($100.00) or imprisonment not to exceed six (6) months, or both.

A CYCLE AMBULANCE CARRIAGE.

THE following description of an unique invention is taken from *The London Lancet:* A new ambulance carriage has been invented by Doctor Hönig, of Berlin. It is not drawn by horses or men in the ordinary way, but is propelled by cyclists, and consists of a kind of litter resting on a frame with five wheels, three in front in the form of an ordinary tricycle, and two at the back. The drivers accordingly sit one at each end of the litter, which is covered by a removable roof with little windows and a pneumatic bell, so that the patient can communicate with the drivers. Beneath the litter are boxes for dressing materials, instruments for first aid, et cetera. Doctor Hönig suggests that his invention would be useful in small towns for which a horse ambulance is too expensive. It brings the surgeon and his assistant very quickly to the scene of an accident, and enables them to remove the patient to the hospital without loss of time. The general opinion here is that the new system will require a greater proficiency in the art of cycling than the majority of medical men possess.' The carriage was shown in the drill-grounds of the fire brigade to surgeons attached to hospitals and the police, as well as to officers of police and the fire brigades, and to other gentlemen connected with the ambulance service.

THE BIALY BOARD OF HEALTH BILL.

A Bill to amend sections one, three, four and five of act number eighty-one of the laws of eighteen hundred and seventy-three, entitled "An act to establish a State Board of Health, to provide for the appointment of a superintendent of vital statistics, and to assign certain duties to local boards of health," approved April 12, 1873, and to repeal all acts and parts of acts contravening the provisions of this act.

Section 1.—The People of the State of Michigan enact, That sections one, three, four and five of act number eighty-one of the laws of 1873, entitled "An act to establish a State Board of Health, to provide for the appointment of a superintendent of vital statistics, and to assign certain duties to local boards of health," approved April 12, 1873, be and the same are hereby amended so as to read as follows:

Section 2.—That a board is hereby established which shall be known under the name and style of the "State Board of Health." It shall consist of six members who shall be appointed by the Governor with the consent of the Senate, and the Governor who shall be *ex-officio* a member, and the board shall appoint a secretary, as provided in section four of this act. The six members first appointed shall be so designated by the Governor that the term of office of two shall expire every two years, on the last day of January. Thereafter the Governor, with the consent of the Senate, shall biennially appoint two members to hold their offices for six years, ending January 31. Any vacancy in said board may be filled until the next regular session of the legislature by the Governor.

Section 3.—The board shall meet quarterly at Lansing, and at such other places and times as they may deem expedient. A majority shall be a quorum for the transaction of business. They shall choose one of their number to be their president, and may adopt rules and by-laws subject to the provisions of this act. They shall also appoint a secretary, who shall not be a member of the board.

Section 4.—It shall be their duty during the month of July in the odd numbered years to elect a president and secretary, who shall hold their respective offices for the term of two years, unless sooner removed by action of the board. They shall have authority to send their secretary, or a committee of the board, or any other competent person, to any part of the State, when deemed necessary to investigate any form of disease or mortality. The Governor shall be *ex-officio* a member of the board.

Section 5.—The secretary shall keep his office at Lansing, and shall perform the duties prescribed by this act or required by the board. He shall keep a record of the transactions of the board; shall have the custody of all books, papers, documents and other property belonging to the board which may be deposited in his office; shall, so far as practicable, communicate with other State boards of health, and with the local boards of health within this State; shall keep and file all reports received from such boards, and all correspondence of the office appertaining to the business of the board. He shall, so far as possible, aid in obtaining contributions to the library and museum of the board. He shall prepare blank forms of returns and such instructions as may be necessary and forward them to the clerks of the several boards of health throughout the State. He shall collect such information concerning vital statistics, knowledge respecting diseases, and all useful information on the subject of hygiene as the board may direct; and through an annual report, and otherwise as the board may direct, shall disseminate such information among the people.

Section 6.—All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

A CANADIAN HOSPITAL.

The Samaritan Hospital for Women is the name of a new institution recently opened at Montreal by Her Excellency the Countess of Aberdeen, wife of the Governor General of Canada. It is non-sectarian, and supported entirely by voluntary contributions, of which latter enough were handed in during the first month to carry on the work during a whole year. It is the only special hospital for diseases of women in Montreal, and will be moulded on the pattern of the celebrated New York State Women's Hospital in New York City. It is managed by a board of thirty of the principal ladies of the city, assisted by an advisory board of three laymen and three physicians. The staff consists of Sir James Grant, M. D., K. C. M. G., consulting physician; W. H. Hingston, M. D., LL. D., consulting surgeon; A. Lapthorn Smith, B. A., M. D., M. R. C. S., England, surgeon-in-chief; H. Lionel Reddy, C. M., M. D., surgeon; S. F. Wilson, C. M., M. D., assistant surgeon and registrar; and Doctors Sylvester and Letellier de St. Just, assistant surgeons. An anesthetist and a pathologist will be appointed shortly. The outdoor service is attended to by the assistant surgeons from 4 to 5 P. M. every day, at which hour the surgeon-in-chief makes his daily visit, and the most urgent cases are admitted. The hospital is absolutely free to women who are poor and sick, and who are residents of the city. Patients from outside the city will be admitted on payment of a nominal charge. The operation days are Thursdays and Fridays at 10:30 A. M., when physicians who have not been attending infectious diseases will receive a hearty welcome.

MINOR INTELLIGENCE.

Paris is to have a new morgue.

The cholera is raging at Mecca.

The passing of red hair is noted in England.

The German Otological Society will meet at Jena on June 1 and 2.

Japan has 1,401,226 prostitutes. Of this number 44,700 are syphilitic.

Consumption caused one-ninth of all deaths in New York state last year.

The twenty-ninth annual meeting of the Kansas Medical Society was held at Topeka on May 16 and 17, under the presidency of Doctor W. R. Priest.

DOCTOR THOMAS PERCIVAL of England, wrote the code of medical ethics in 1807.

PENNSYLVANIA has abolished the practice of kissing the bible in courts of justice.

DOCTOR H. E. HOLMES, of Minneapolis, has introduced a new eye fixation forceps.

THE Society for First Aid to the Injured in New York have organized an alumni association.

A SECTION in ophthalmology was organized at the recent meeting of the Medical Association of Georgia.

THE legislature of Missouri has recently enacted a law providing for the prevention of blindness in children.

DOCTOR WILLIAM H. WELCH, of Baltimore, has been elected a member of the National Academy of Sciences.

FREE hospitals are not liable in suits for damages. This edict emanates from the Supreme Court of Connecticut.

THE Johns Hopkins Medical School has an attendance of twenty-five per cent. of women among its students.

A COURSE in bacteriology is now offered in Buffalo. Out of 600 physicians in that city only six are taking the work.

ONLY three forms of sexual perversion are recognized by the laws of England. They are tribadism, sodomy and bestiality.

COMPULSORY vaccination has ceased in the Canton of Berne, Switzerland. The practice was abolished by popular vote.

THE American Microscopical Society will meet in Cornell University, at Ithaca, New York, on August 21, 22 and 23.

THERE are forty thousand blind in France, eighteen thousand of whom lost sight as a result of ophthalmia neonatorum.

THE Supreme Court of Iowa has decided that a physician is liable for damages accruing from the premature dismissal of a patient.

THE Baltimore City Council is asked by the Medical and Chirurgical Faculty to compel physicians to report cases of typhoid fever.

THE legislature of Illinois recently defeated a bill providing that insanity of five years' duration constitutes legal ground for divorce.

THE bill to regulate the practice of medicine in Michigan has been returned to the legislature by the Governor for minor amendment.

DOCTOR OSCAR H. ALLIS, of Philadelphia, captured the S. D. Gross prize of $1,000, his essay being entitled "An Inquiry into the Difficulties Encountered in the Reduction of Dislocation of the Hip."

THE investigation which has been instituted to ascertain the cause of the great prevalence of contagious diseases in the schools of New York has elicted the fact that out of 112 school trustees 32 are undertakers.

THE American Neurological Association will convene in twenty-first annual session at Boston on June 5, and continue its meetings for three days.

THE Anglo-American Medical Society is the name of an organization recently established in Berlin. It is composed of English-speaking physicians.

REPRESENTATIVE REUBEN KEMPF'S bill, providing for the prevention of blindness, has passed both branches of the legislature. It is published on another page.

THE ALKALOIDAL CLINIC, edited by Doctor W. C. Abbott, and published at Chicago, is a welcome visitor to our sanctum. It is replete with practical material.

A MEDICO–LEGAL Congress, to be held under the auspices of the Medico-Legal Society, will convene in New York City this summer, the date to be announced.

CALIFORNIA has made an appropriation of $5,000 for the manufacture of diphtheria antitoxin. It is the first state in the Union to make provision for this purpose.

THE Brooklyn Naval Hospital will be enlarged by the addition of a wing. The funds available for this purpose, and the equipping of an operating room, amount to $69,000.

THE City Council of Baltimore has passed an ordinance providing for the introduction of physical training into the public schools, and fixing the salary of the instructor at $1,500.

A BILL is pending in the Massachusetts legislature which provides that life insurance companies be prohibited from issuing policies on the lives of children unden ten years of age.

THE Fourth International Congress of Dermatology will convene in London on August 4, 1896, under the presidency of Mr. Jonathan Hutchinson, and continue its sessions four days.

A HOSPITAL for children, with a capacity of 1,000 beds, will be founded in Vienna by the medical profession in commemoration of the fifteenth year of the reign of the Emperor Francis Joseph.

PHYSICIANS who practice medicine in North Carolina are compelled, by recent act of the legislature, to pay an annual tax of ten dollars into the state treasury. This is class legislation with a vengeance.

THE Canadian Medical Association will meet at Kingston, on August 28, 29 and 30. The address in medicine will be delivered by Doctor James Stewart, of Montreal, and that in surgery by Mr. J. H. Cameron, of Toronto.

DOCTOR F. A. SPALDING, of Detroit, aged fifty-seven years, recently died suddenly of an affection of the heart. He had been a resident of the city for fifteen years, and formerly lived at Ann Arbor where he was connected with the University of Michigan.

THE Michigan Surgical and Pathological Society held its annual meeting in Detroit on April 3. The following officers were elected for the ensuing year: President, Doctor J. A. Patton; vice-president, Doctor John Kirker; secretary, Doctor Edward T. Milligan; treasurer, Doctor M. V. Meddaugh.

Doctor John W. Coles died at his home in Philadelphia on the 6th of April, aged fifty-five years. The doctor served nearly thirty-two years in the United States navy, having entered May, 1863, and being placed on the retired list February 5, 1895.

The East-Side Medical Society is of recent advent in New York City. It has been established by physicians in the lower part of the metropolis. It has a plank in its platform which denounces organizations giving gratuitous services to indiscriminate poor.

Stamford, Connecticut, has recently been experiencing an epidemic of typhoid fever. The source of the disease is attributed to an infected well, the water from which was used to wash the milk cans of a dairyman along whose route the fever appeared.

Doctor David A. MacJerrow, of Detroit, recently died from an overdose of chloral which drug he had been taking several days for nervousness. The doctor was born in Scotland, and located in Detroit last February, where he was obtaining a good practice.

Maine has a law regulating the practice of medicine. Its passage is largely due to the indefatigable exertion of the Maine Academy of Medicine. While the law is not an ideal one, yet it will serve as a wedge for effecting more stringent enactment in future.

The Medical Association of Georgia elected the following officers at its recent meeting in Savannah: President, Doctor F. M. Ridley, of LaGrange; vice-presidents, Doctors W. H. Doughty, of Augusta, and M. L. Boyd, of Savannah; secretary, Doctor R. N. Taylor, of Griffin, Augusta was selected as the next meeting place.

A hospital for small-pox patients is to be erected in Washington City. It will be two stories high, the first floor being designed for colored patients and the second for white patients. The floors and inside walls will be cemented that a hose may be employed in cleansing. The building will be encircled by a wall six feet in height.

The American Medical Publishers' Association elected the following officers at their recent Baltimore meeting: President, Doctor Landon B. Edwards, of Richmond; vice-president, Doctor J. C. Culbertson, of Cincinnati; secretary, Charles W. Fassett of Saint Joseph, Missouri; treasurer, J. MacDonald, Junior, of New York City.

Doctor Charles Sutherland, Surgeon-General of the United States Army, died in Washington on the 11th instant, aged sixty-six years. In March, 1865, he was brevetted colonel for meritorious service during the civil war. In 1884 he became Medical Director of the Atlantic, and in December, 1890, he was appointed Surgeon-General.

Dr. J. N. Dixon, of Springfield, Illinois, was recently fined twenty-five dollars for contempt of court. He was subpenaed by the city as an expert in a suit for damages, but declined to testify without compensation. The court held that the witness was obliged to answer an hypothetical question whether paid or not. The doctor has appealed to the appellate court which convenes this month.

DOCTOR J. M. TONER, of Washington, District of Columbia, celebrated his seventieth birthday on Tuesday, April 30, by a grand reception to which all the members of the Medical Association of the District of Columbia, numbering about four hundred, were invited.

ONE hundred and forty medical schools foster in the United States. Fourteen require a four-years' course of study, proximately one hundred exact an attendance upon three courses of lectures, and about twenty-six announce their ability to produce full-fledged physicians by a course of two terms. The length of the terms range from five to nine months.

MASSAGE is practiced almost exclusively by blind persons in Japan. In Saint Petersburg also the blind are largely engaged in this pursuit, and a prominent massage school has a blind professor. It is claimed that the sense of touch is more delicate and developed in persons deprived of vision and consequently their eminent fitness for masseurs and masseuses.

A JAG-CURE bill has been introduced into the legislature of Illinois. It provides for the treatment of drunkards at county expense when the patient or his people cannot afford the outlay. The particular remedial measure to be employed is left to the discretion of the court, but the supporters of the bill are advocates of the treatment in vogue at the Keeley institute.

THE Bialy bill now before the legislature, providing for the reorganization of the State Board of Health, is published on another page of this issue. This bill has passed the Senate. The Miller bill for the same purpose was defeated in the House, but will probably be reconsidered in the event that the Bialy bill fails of passage in the House. In the meantime the work of investigating the Board continues by the legislative committee.

AT its meeting in Baltimore, the American Medical College Association decided that the four-years' course shall go into effect with the students entering in 1895. The following officers were elected: President, Doctor William Osler, of Baltimore; vice-presidents, Doctors J. M. Bodine, of Louisville, and D. W. Graham, of Chicago; secretary and treasurer, Doctor Bayard Holmes, of Chicago.

THE Anti-Vice Society has introduced a bill into the legislature of New York which provides for the regulation of prostitution. The measure contemplates the appointment of three commissioners who shall have power to district the city for the houses and issue licenses ranging from $250 to $500. Provision is also made for bi-weekly examinations by six salaried physicians, and six inspectors whose duty shall be to exercise general supervision over these haunts of impurity.

THE Protestant Hospital Association, of Saint Louis, Missouri, was recently sued for $5,000 damages by a man whose wife died of peritonitis in the hospital. The patient entered for a trachelorrhaphy, and it was alleged that the peritonitis resulted from taking cold through a window which had been left open for several hours after the operation. The attending physician contended that the draught produced the peritonitis, while a number of disinterested physicians expressed the opinion that the disease was septic in origin and resulted from the surgical procedure. The jury gave a verdict in favor of the Hospital Association.

THE American Medical Editors' Association elected the following officers at their Baltimore meeting: President, Doctor George M. Gould, of Philadelphia; secretary, Doctor H. B. Ellis, of Los Angeles, California; treasurer, Doctor Ohmann-Dumesnil, of Saint Louis.

THE Ohio State Medical Society held its semi-centennial meeting at Columbus on May 15, 16 and 17. The attendance numbered about 500, the membership being augmented by 104 applicants. The sessions were interesting and profitable. During the ensuing year the following officers will have *charge d'affaires* of the society: President, Doctor Dan Millikin, of Hamilton; vice-presidents, Doctor J. H. Goss, of Lancaster, Doctor William H. Humiston, of Cleveland, Doctor John W. Murphy, of Cincinnati, Doctor B. M. Ricketts, of Cincinnati; secretary, Doctor Thomas Hubbard, of Toledo; assistant secretary, Doctor H. M. W. Moore, of Columbus; treasurer and librarian, Doctor Jas. A. Duncan, of Toledo.

CONTEMPORARY OPINION.

MEDICAL ETHICS AND MEDICAL SCIENCE.

[THE PHILADELPHIA POLYCLINIC.]

MEDICAL ethics and medical science cannot be separated. If quackery and charlatanism and self-seeking are allowed to become dominant in medical associations, and to win the rewards of honor which should be bestowed upon opposite qualities, those who enter the ranks of the profession will be encouraged to pursue the wrong and deterred from following the right. Under such circumstances greed and untruth must come to the front, and science cannot flourish where this is possible.

THE UNIVERSITY AND THE LEGISLATURE.

[DOCTOR DONALD MACLEAN IN THE DETROIT FREE PRESS.]

WHEN the honorable the board of regents, through one of its most influential members, protests against the removal of one department to Detroit on the ground that overwhelming proof would thereby be furnished in favor of the removal of several others to this city; when it is thus openly and officially avowed that the sacred interests of this great educational institution, as well as the interests of the generous and noble hearted taxpayers of the state are knowingly and in cold blood sacrificed for the sake of a sentimental fad and to please the beneficiaries at Ann Arbor,—who shall dare to censure Governor Rich or any other honest and independent citizen who lifts up his voice and uses his god-given power to head off wrong-doing and protect all the great and priceless interests involved? Once more, when a professor who owes to the University all that he is, and even all that he claims to be, publicly disavows his debt to the University and officially, for selfish political purposes, elects to credit a political bureau with the results of work done and alleged discoveries made by him by means of the appliances, and as everybody knows very largely by the aid of assistants furnished him by the University, is it not time to call a halt and hesitate as to the voting of large appropriations to maintain the laboratories, the professors and the army of officials at the University?

A certain individual claims to have discovered, and even applied the name, "tyrotoxicon," and therefore the State Board of Health, it is urged, should be sanctified; not only so, but on the selfsame grounds, it is claimed that the

University laboratories should be glorified and liberally endowed. A more barefaced fraud—so far as I remember—has never been foisted upon a credulous community. Tyrotoxicon was discovered and named and its essential characteristics fully described, and published in the year 1824 and, still later, in 1842, and any man who dares to claim to have discovered and named that peculiar poison in our day is an impostor and a charlatan.

Its ultimate chemical formula may possibly have been more or less accurately determined in the laboratory at Ann Arbor, but if so the actual work and result is not the property of one, but of several persons, although one individual has chosen to monopolize all the glory. But leaving the question of priority on one side will any one inform us in plain English what, if any, real practical benefit to suffering humanity has accrued from all the palaver and all the grandiloquence, which has been associated with this mysterious chemical product of late years, and why is it that Professor Vaughan should be terrified lest the University should in this particular appropriate to itself all the thunder which, he declares, belongs through him to the State Board of Health? Mr. Editor, I believe in the State Board of Health, as at present constituted, and hope it will be sustained. I also believe in the University, and my most earnest desire is that it may enjoy the highest degree of prosperity and usefulness. But its true friends cannot help feeling alarmed for its welfare when we see those to whom its interests are confided resorting to the devices of the pettifogger and the tricks of the charlatan and the lobbyist. Unless I or many others are greatly mistaken, a full and genuine investigation into the affairs and methods of the medical departments at Ann Arbor would strike the average intelligent taxpayer dumb with amazement.

RECENT PUBLICATIONS.

REVIEWS.

THE INTERNATIONAL MEDICAL ANNUAL FOR 1895.*

A LARGE number of practitioners anticipate with pleasure the arrival of the "International Medical Annual." No disappointment will ensue this year, as the annual presents all the solid qualities so observable in previous issues. The dictionary of new treatment is fully as well maintained as in previous years. The illustrations are numerous and well executed. The selections have been pruned in a careful and judicious spirit, and the reader is presented with the essential facts of all advances in the medical sciences.

* Price $2.75. E. B. Treat, New York.

TRANSACTIONS OF THE ANTISEPTIC CLUB.*

THE medical humorist is an individual who might with advantage be seen oftener than he is. The volume appearing under this title is of a jocose nature. It is said to be "illumined by phosphorescent microbes of sarcasm" and at the same time "to be laden with sterilized wit and humor." Although the sterilization has in some instances been carried to extremes, the humorous character of many of the chapters is indisputable. A rechauffage of chestnuts is frequently to be noted, and notwithstanding the jejune character of much of it, it is a good book for the physician to take up when he needs something that will amuse if not instruct him.

* Reported by Albert Abrams, a Member of the San Francisco Medical Profession. Price $1.75. Illustrated. E. B. Treat.

LANDMARKS OF GYNECOLOGY.*

THE "landmarks" DOCTOR ROBINSON discusses are six in number: anatomy, menstruation, labor, abortion, gonorrhea, and tumors. The consideration of these subjects naturally opens up to comment the field of gynecological surgery in general. In this DOCTOR ROBINSON shows himself well-informed, and his elucidation of the various troubles which affect the female is marked by completeness, and accurate knowledge. A perusal of DOCTOR ROBINSON's manual will be found profitable and suggestive to all practitioners.

* By Byron Robinson, M. D., Chicago, Professor of Gynecology in the Chicago Post-Graduate School. George S. Davis, Detroit.

A MANUAL OF SURGICAL ASEPSIS.*

Now that bacteriology has completely revolutionized the practice of surgery, and a knowledge of the science has become indispensable to physician and surgeon, such manuals as these have a distinct calling. The manual here presented is an admirable example of its kind, detailing with precision and exactness the principles upon which aseptic surgery is based. The chapters on the treatment of wounds will be found especially meritorious. The work is amply illustrated, and the instruments and apparatus for sterilization are brought clearly within the understanding of the reader.

* By Carl Beck, M. D., Visiting Surgeon to Saint Mark's Hospital and German Polyklinik of New York City. Price $1.25. "Saunders' New Aid Series." W. B. Saunders, Philadelphia.

DETACHABLE DIET-LISTS.*

THESE detachable diet-lists will be found a boon and a convenience to every physician. To be able to give patients explicit directions in the matter of diet is at once a desideratum not to be despised. In the present instance all that has to be done is to take out a leaf of the book and the patient is in possession of the diet suitable for his use. The scheme cannot be too highly commended.

* A Book of Detachable Diet-Lists for Albuminuria, Anemia, Debility, Constipation, Diabetes, Diarrhea, Dyspepsia, Fevers, Gout or Uric Acid Diathesis, Obesity, Tuberculosis and a Sick-room Dietary. Compiled by Jerome B. Thomas, A. B., M. D. W. B. Saunders, Philadelphia.

SIMON'S CHEMISTRY.*

THE fifth edition of "Simon's Chemistry" indicates that the work has clearly justified its claim to the praise so liberally accorded it in reviewing former editions. It will be found *par excellence* the manual for the student and practitioner of medicine. As an aid to laboratory work the beautiful colored plates will add great value.

The new edition has been thoroughly revised in accordance with the advance of the science, and in order to bring it into complete harmony with the pharmacopeia.

*A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Tex-Book specially adapted for Students of Pharmacy and Medicine. By W. Simon, Ph. D., M. D., Professor of Chemistry and Toxicology in the College of Physicians and Surgeons, Baltimore; Professor of Chemistry in the Maryland College of Pharmacy. New (fifth) edition. In one octavo volume of 502 pages, with 44 engravings and 8 colored plates illustrating 64 of the most important chemical tests. Cloth, $3.25. Philadelphia: Lea Brothers & Company, 1895.

REFERENCES.

THE LITERARY MAGAZINES FOR MAY.

THE ATLANTIC MONTHLY.

"The Seats of the Mighty," by Gilbert Parker occupies several pages. There is an article on "Doctor Rush and General Washington," by Paul Leicester Ford, which will prove highly interesting to physicians. Elizabeth Stuart Phelps continues her story on "A Singular Life." Theatrical ideas are represented by T. R. Sullivan's "A Standard Theatre," and Richard Harding Davis has a second paper on "New Figures in Literature and Art." These are followed by "Tramps with an Enthusiast," by Olive Thorne Miller; "A Talk over Autographs," by George Birkbeck Hill; "Christmas Shopping at Assuân," by Agnes Repplier; "Some Notes on the Art of John LeFarge," by Cecilia Waern, and a scientific article on "Mars," by Percival Lowell. Houghton, Mifflin and Company, Boston. Single copy, 35 cents; yearly, $4.00.

MacCLURE'S MAGAZINE.

This periodical contains a frontispiece of "Prince Bismarck, 1894," together with a series of twenty-two of his portraits, under the title of "Human Documents." The life and history of Napoleon, by Ida M. Tarbell is continued in this number under the special subject of "The Second Funeral of Napoleon." A talk with "Gaston Tissandier, the Balloonist," by Robert H. Sherard, with portraits and illustrations is particularly interesting, as is also "A Prairie College"—an eminent French woman's study of co-education in America, by Madame Blanc. "The Destruction of the Reno Gang"—stories from the archives of the Pinkerton Detective Agency, by Cleveland Moffett; "Tammany"—its early spoilsmen and the reign of the plug-uglies, by E. J. Edwards, with portraits and other pictures, also appear in this issue.

SCRIBNER'S MAGAZINE.

The May issue contains its usual number of finely illustrated articles. "A History of the Last Quarter-Century in the United States," which is to be continued throughout the year, becomes more interesting with each issue. A short sketch of the ancient game of "Golf" is of special interest to athlectic clubs. "The Story of Bessie Cottrell," by the author of "Robert Elsmere," Mrs. Humphrey Ward, has its beginning in this issue. "French Posters and Book-Covers," by Arsène Alexandre, will be treated in several numbers with instructive illustrations. Among other articles will be found the "Art of Living," by Robert Grant, with humorous illustrations; "A Short Study in Evolution," another of the series of the College Girls' Stories, by Abbe Carter Goodloe; a discussion by Joseph Wetzler, "Will the Electric Motor Supersede the Locomotive?" and "The Martyrdom of John the Baptist," by Wolcott Le Cléar Beard.

FRANK LESLIE'S POPULAR MONTHLY.

THE May number contains several poems,—"In the Highlands," by Robert Louis Stevenson; "The Turn of the Tide," by Lizzie T. Green, and "She and I," by Lilian Caxton. Harry A. Armstrong has a story on "The Judge's Experience," and Anna Pierpont Siviter writes on "Aunt Abigail Turns Financier." There are two botanical articles, "The Business of Blossoms," by Martha McCulloch Williams, and "The Reign of the Olive," by Frederick M. Turner. The issue abounds in illustrations and is very entertaining. Mrs. Frank Leslie, New York. Single copy, 25 cents; yearly, $3.00.

LITTELL'S LIVING AGE.

THE May issue abounds in fine selections from the leading English and American Magazines. S. R. Crockett writes on "Scottish National Humors;" Alphonse deCalonne on "Domestic Architecture in Paris." A. W. W. Dale has a highly interesting article on "Sidney Smith and Social Reform," and C. B. Roylance Kent one on "The Situation in Italy." "Twelve Hundred Miles in a Wagon," by Miss Balfour; "Money Making at the Tower;" and "The Decline of the House of Commons," by Sidney Low are also noteworthy. There is the usual amount of poetry. Littell & Company, Boston. Single copy, 18 cents; yearly, $8.00.

THE POPULAR SCIENCE MONTHLY.

PROFESSOR JAMES SULLY, L.L. D., has an article of educational value on "Studies of Childhood;" "Microbes as Factors in Society" by M. L. Capitan, translated from *The Revue Scientifique*, will be found of special interest to the medical profession. "Archeology in Denmark," by Professor Frederick Starr; "Kidd on Social Evolution," by W. D. LeSueur; "Race Mixture and National Character," by L. D. Harley, and "An Old Naturalist" are well worth the reading. "Woman as an Inventor and Manufacturer" is of interest as showing the labor of primitive and semi-civilized woman. D. Appleton & Company, New York. Single copy, 20 cents; yearly, $4.00.

THE AMERICAN MONTHLY.

THE number contains an interesting article on "Reminiscences of Valley Forge and General Washington's Headquarters," by Mrs. Anna Morris Holstein; "A Tribute to a Hero of the Revolution," by Ellen H. Cantrell; "Captain John Hawkins," by Margaret V. Smith, and "The Oldest Church in Pennsylvania," by Margaret B. Harvey. Fulton Colville has a sketch on "Washington's Birthday;" Edith Herbert Mather writes interestingly on "The Mother of two Patriots," showing how traits of character are transmitted. The magazine is illustrated and will prove of unusual interest. Published by the National Society, Washington, District of Columbia. Single copy, 20 cents; yearly, $2.00.

THE CATHOLIC WORLD.

THE Easter number of this excellent periodical is introduced by an article entitled "Bonaparte and the Black Cardinals," by B. Morgan. "A Bit of the Old World in the New," by Henry Austin Adams, is both instructive and interesting. "The Training School for Nurses of the Sisters of Charity," by Thomas Dwight, M. D., is descriptive of the inception of early hospitals. It is cited that the first great hospital was built by Saint Basil at Caesarea in the year 370, and the celebrated Hôtel Dieu hospital of Paris is said to have been founded in the seventh century. Among other articles that will be found of interest in this issue are "Glimpses of Italy," by E. C. Foster; "Missionary Experiences," by Reverend Walter Elliott, formerly of Detroit; and "Theosophy and Protestantism," by Reverend Francis B. Doherty. New York: The Catholic Publishing Company. Single copy, 25 cents; yearly, $3.00.

PRACTICE.

THE THEORY OF THE HYPNOTIC ACTION OF THE SULFONES.

Recent investigations have shown that a definite relationship exists between the chemical constitution and physiological action of certain bodies. As regards the group of hypnotics this has been true of the alcohols and sulfones.

In reference to the sulfones Baumann and Kast, as the result of numerous observations, have shown that disulfones which contain methyl groups are completely or but slightly effective, while those having ethyl groups in their molecules possess an intense hypnotic effect, the intensity of their action being proportional to the numbers of ethyl groups which they contain. These authors especially emphasize the fact that in the action of the disulfones the group SO_2 plays no part; and they further show that the inefficiency of the methylated sulfones depended upon their resistance toward the metabolism, since they pass entirely or for the most part unchanged through the system, while the active disulfones containing ethyl groups are almost completely decomposed in the tissue changes.

One of the disulfones, dimethylsulfondimethylmethan, seemed to be an exception to this rule. Experiments on animals and human beings demonstrated that this disulfone was perfectly ineffective even in the large doses of 6.0 to 8.0 gm. Notwithstanding this the unchanged disulfone could not be detected in the urine. To explain this contraindication I resorted to a new method and investigated again this question of so much importance in connection with the theory of the action of the disulfones. With this method Morro succeeded in positively detecting quantities of a milligramme of sulfonal or trional in the urine and to separate the sulfones in a pure state from the urine.

By repeating the experiments of Baumann and Kast he succeeded in demonstrating that dimethylsulfondimethylmethan for the most part passed unchanged through the organism, and this sufficiently explains its inefficiency.

The author took for two successive days 2.0 gm. dimethylsulfondimethylmethan daily without a trace of effect. From the urine which was collected for the two days he was able to recover 0.84 gm. chemically pure dimethylsulfondimethylmethan having a melting point of 118°. It is noteworthy that during the following days the urine also contained some disulfone.

These experiments confirm the correctness of the conclusions of Baumann and Kast, that the hypnotic action of the sulphones which is chiefly due to the number of ethyl groups contained in their molecules is also dependent to a considerable extent upon the degree of decomposition to which the molecules of the various sulfones are subjected in the metabolism.

The great difference between the action of the methylated and ethylated sulfones is therefore chiefly due to the fact that the ethyl groups of these bodies are more easily attacked by the metabolic process than the methyl groups.

In a previous article the author showed that among the series of ethylated sulfones the nature and manner of the different bodies was intimately connected with the behavior of the sulfones in the metabolism. He demonstrates that trional was completely destroyed in the tissue changes, even when administered for a number of weeks, while sulfonal and tetronal are not completely decomposed and slowly eliminated. This fact explains in the simplest manner, the observation universally made, that the action of trional, although more rapidly developed than that of sulfonal, is more rapidly and completely dissipated than in the case of the latter drug or of tetronal; and that when trional is given in proper doses after-effects or delayed action are practically excluded. —Aben W. Morro, M. D., in *Deutsche Medicinische Wochenschrift*, Number XL, 1894.

CLINICAL NOTES.

The Grippe.—

℞.	Benzoate Sodium,	1–2 oz.
	Glycerine,	1 oz.
	Liq. Tong. Sal.,	3 ozs.
	Aqua Mentha Pip.,	2 ozs.

Misce. Signa—Tablespoonful every two to four hours.

I take pleasure in commending to my fellow practitioners calisaya cordial (Tilden) as an ideal tonic for invalids who have exhausted the ordinary remedies without effect. Also those convalescing from the grippe, low fevers, and nervous prostration. It successfully combines digestives with tonics without impairing the virtue of either and is very palatable. I never met its equal and welcome it as coming to remain.—A. S. Adams, M.D., Rochester, Minnesota.

Doctor R. Cantalupi, writing from Naples, Italy, under recent date says: bromidia has produced successful results in all the most varied forms of insomnia. Among others who have been benefited by its use is Professor Cesare Olivieri, well known as a most distinguished surgeon in this city, and who, after undergoing tracheotomy for neoplasm in the larynx, suffered terribly from insomnia, which the usual hypnotics all failed to relieve. Hearing of this, from a mutual friend, I advised the use of bromidia, which promptly produced the desired result.

I have for a number of years been subject to periodic attacks of hepatic congestion, and, after going the usual rounds without much benefit, I determined to try Peacock's chionia. I am free to say that the results obtained from the use of two bottles were eminently satisfactory. Prior to its use my urine was very light colored and it was gratifying to see it return so promptly to its normal condition. The sclerotic change was also very perceptible. Peacock's chionia is a frequent ingredient of my prescriptions. I have had remarkable results from its use.—J. Pierce Roberts, M. D., Shenandoah, Pennsylvania.

One Hundred Points of Perfection.—It is only a few years since the Pabst Brewing Company's malt extract was first placed on the market. It was introduced as the "Best" tonic, and through its excellence soon became a general favorite. At the great Columbian Exposition at Chicago, the Pabst malt extract was examined by the government chemist and the board of judges, and the result was the highest flattery that could be bestowed. Of all the host of malt productions they examined, coming both from this country and from Europe, the "Best" tonic was selected as the only one thought worthy of the highest rank. It was marked with the one hundred points of perfection. Such a distinction has never been conferred in the history of expositions. It recognized the Pabst malt extract as the head of scientific malt foods and in advance of the highest previous attainments in the production of malt extracts.

The Physician and Surgeon

A JOURNAL OF THE MEDICAL SCIENCES.

VOLUME XVII. JUNE, 1895. NUMBER VI.

·ORIGINAL CONTRIBUTIONS.

MEMOIRS.

REMARKS ON SOME OF THE FEATURES OF THE GRIPPE AND INFLUENZA.*

BY E. L. SHURLY, M. D., DETROIT MICHIGAN.
PROFESSOR OF LARYNGOLOGY IN THE DETROIT COLLEGE OF MEDICINE.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

I AM impelled to apologize for inviting your attention to the subject of influenza or the grippe, upon which so much has been written during the last century, because I know that I must necessarily offer many platitudes in reviewing it from almost any stand-point.

But my reason for thus, perhaps, inflicting you is that its widespread prevalence, heterogeneous local characteristics, anomalous complications and sequelæ, together with the continued state of ignorance concerning its exact nature and prevention, would seem to justify a discussion of such a topic at any suitable time or place.

I shall endeavor, however, not to weary you with didactic details relating to its history, accession, course, et cetera, but rather attempt to pass in review a syllabus of some of the knowledge pertaining to the disease,—to serve as a basis for reflection and discussion.

Among the several striking things regarding influenza is the fact that since the time of its early recorded recognition which, according to PARKES, was about the ninth century, it has assumed either a pandemic, epidemic or endemic phase, with varying intermissions or cycles from two to fifty years (excepting one interval of two hundred years). Also that during this great stretch of time the clinical features of these undulations have preserved a tolerably analogous and protean type, so that the pandemics or epidemics of 1557, 1743, 1847 and 1892, have presented about the same general characteristics in their course, whatever race of human beings were the subject of attack; and with few exceptions, also selected for its victims about the same class and age of persons, and transferred to death about the same ratio of lives. In ancient, as in present times, there have been the same controversies regarding its origin, cause, pathology, prevention and relation to that similar form of disease affecting domestic animals—

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* Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

known as the epizootic. Of course it is not meant by this statement that the individuality, so to speak, attending different racial or social conditions has produced no modifications of natural or clinical history, but only that its specific phenomena has been comparatively persistent throughout all this time, so that the grippe of our day tallies well with the recorded grippe of ancient times.

Certain epidemics have been characterized, for instance, by continued severity; others by frequent relapses after short intervals; others again by striking intensity or complications and sequelæ affecting mostly particular regions or apparatus of the body; but all have presented, as said before, a similarity of general features. Nearly all writers from decade to decade have formulated at least three classes according to the prominent lesions observed, namely, the pulmonary or respiratory; abdominal or gastro-intestinal; and nervous or bulbar; while some of the older authors and observers mention arthritic, hepatic, renal, and cardiac groups of cases. All seizures have shown a marked predilection toward affecting the nervous system, and mucous membranes, especially of the respiratory organs.

Regarding its source, there has been much acrimonious speculation among European nations, each state for awhile being wont to attribute the origin of a prevailing epidemic to its neighbor, and so on, until the consensus of opinion in more modern times has come to designate either China, Russia, Italy, India, or all of these countries together as a nidus of the pestilencé. However, that may be, several Anglo-Indian observers have asserted positively that it does not arise—nor even prevail—to any extent in India. I think the British and American writers look upon it as particularly a Russian disease in the beginning, arising principally from the unhappy, ignorant, squalid and generally unhygienic condition of those patient but distressed people in consequence of the inhuman social system belonging to the Russian Empire.

The late pandemics or epidemics of 1889, 1891 and 1892 have made us all familiar with the salient features of the grippe, namely, suddenness of attack; high temperature lasting from two to seven days; the inceptive coryza and cough; cephalalgia; myalgia; dyspnea and disproportionate general prostration—all very significant testimonials of vaso-motor disturbance. These signs—whatever form the disease may have assumed remotely—have been inevitably present with varying degrees of severity in all cases. There has been much discussion as to whether all cases of so-called influenza are of the same nature. Whether, in other words, the influenza so invariably occurring throughout the north temperate zone during the spring and autumn of every year should be classed with this rapidly-spreading disease, the grippe, which may invade a whole continent at once, crossing land and sea in a few days or weeks and striking down hundreds of inhabitants in every region visited without apparent discrimination, and perhaps in a few hours after its advent. It has, therefore, indeed been many times doubted whether the harmless, common, local influenza can be really identical with the other universal devastating scourge called the grippe, the behavior of which is suitably fitted to the following words of Proctor's Mirandola:

> "I'll keep my way alone, and burn away—
> Evil or good I care not, so I spread
> Tremendous desolation on my road;
> I'll be remembered as huge meteors are;
> From the dismay they scatter."

While I confess my inability to discuss this point to a satisfactory conclusion, yet I will take the liberty of discussing it somewhat and suggesting that there must be the same sort of difference between the grippe and ordinary influenza that probably exists between Asiatic cholera and cholera morbus, or follicular tonsillitis and diphtheria, namely, a difference either in the quality, quantity or character of the *materies morbi*, but which, being of the same or similar chemic or biologic constitution effects selectively or electively the same apparatus or organs; in this affection, especially the ganglionic nervous system. This, of course, is mere theory, and theory as we are aware, is valuable only as furnishing a part of the woof to the process of weaving together facts, forces, and their mutual resultants.

Our knowledge of the etiology of the grippe, or even influenza is now nearly as painfully uncertain or more so as it has been throughout the last century. The elements—air, water and earth—have each in turn and collectively been investigated, and have ofttimes been accused, but without avail, of begetting and extending the scourge, either as principal or auxiliary agents, for inasmuch as a disease which neither climatic nor telluric conditions can repel or scarcely mitigate; which accompanies the east as well as the west wind, the south as well as the north wind ; which extends its ravaging operations "in season and out of season" along the tropics as well as along the northern zone; which is (as far as now known) unchecked by either electric, ozonic or other modifications of the atmosphere; which is not even "a land lubber," but strikes those on the high seas who unluckily traverse its path,—cannot be considered, therefore as dependent upon climate or atmospheric vicissitudes for its exploitation. Such conclusions were not only reached by earlier observers after much careful observation and reasoning, but undoubtedly stand true today, in the light of the history of recent epidemics. Notwithstanding this, however, we frequently notice that so far as purely local influenza is concerned, changes of atmospheric conditions, such as temperature, humidity, or other essentials will affect the exacerbation or remission of the malady, and to a certain degree also influence the augmentation or diminution of the number of cases. As to the great influence of clothing, habits, occupation, et cetera, in favoring or avoiding incursions of the malady, grippe, I am incredulous, for I have observed with interesting wonder the spread of the disease indiscriminately among the most favorably situated classes of persons, as well as among those under opposite conditions of life. While it is true that variations in the course of the disease in some epidemics or endemics make it appear that those of robust constitution, good and simple habits, and who pursue an out-of-door occupation, enjoy greater immunity from attack, yet, on the other hand, it will be found that the summing up of observations on this point, covering a period of several years and including many cases, will seriously alter such a conclusion. I am even incredulous regarding the oft-repeated statement that those of sensitive or highly refined mental temperament, or so-called nervous persons of adolescent years, are more susceptible subjects of this disease than the mentally inferior human beings, other things being equal. The reason that such frequently appears to be the case would seem due to the fact that such nervous persons through their sensitive natures become more easily perturbed and seek medical relief earlier. According to my observations, I would conclude that a highly developed nervous organization, otherwise healthy, while being more readily cognizant, so to speak, of the invasion of a morbific agent, is yet better able to resist the fermentative or biochemic effects of such poison than one of inferior mental type. In other words, that the proportion of recoveries in an equal number of the former class will be greater than in the latter class.

The contagiousness of influenza has been noted and proved during many years, and therefore may be considered as an established fact; and this applies also to the purely local visitation of the disease to a limited extent, as well as to the epidemic form, or so-called grippe. The susceptibility of the aged, and the insusceptibility, ordinarily, of the very young may also be considered as an established fact.

My conviction in respect to the question of the identity or rather unity of the grippe and ordinary influenza is contrary to that expressed by many practitioners; for I believe, in the light of our present knowledge, that each is an entity. The only resemblance admissible is the phenomena attending the invasion—the clinical phenomena—such as coryza, cough, headache, general malaise, myalgia, et cetera; phenomena which accompany to a greater or lesser extent any irritation or disturbance of the sympathetic nervous system, whatever the noxious agent may be. That there is an analogy, of course, must be admitted, but as similar analogies are common between systemic diseases or disturbances involving this great regulating nervous mechanism, it ought not to be considered of sufficient weight to overthrow the overwhelming evidence produced by the widely different course and effects of influenza and the grippe respectively. Strychnine poisoning and tetanus, for instance, present about the same clinical features, yet who would regard them as the same disease? Likewise, various forms of septicemia, and typhus or typhoid fever present striking clinical analogies, and so on other examples might be cited. The so-called hay fever, asthma, the coryza produced by various chemical or sabulous agents inhaled, will produce—as we all know—by transient irritation of the peripheral nerve filaments distributed to the nasal mucous membrane, more or less congestion of the capillaries and symptoms of coryza and headache almost amounting to influenza. But these local effects are in no sense analogous when duly considered to the profound and extensive impression produced by the poison of the grippe upon the sympathetic nervous system governing respiration and circulation which even extends to the cerebro-spinal centres. The intense interest which the concealed specific cause and disastrous course of the disease has always awakened has necessarily led to much thought and numerous formulated speculations from time to time, concerning the essential character of this poison of the grippe. These have been promulgated from time to time by the older authors and denominated miasm, effluvia, exhalations, et cetera, and have, of course, come to naught in serving any definite purpose, although they have served perhaps feebly in pointing the way toward a solution of this vexed problem of etiology. Several erudite men have many times approached the confines of our illustrious bacteriologic era by prophesying the detection some day of some epiphyte or vegetable germ as the cause of the dreaded malady. This, I believe, was the prediction of the justly famous Doctor Watson and others more than thirty-five years ago, but it was not until 1892 that anything but hypothesis offered a reasonable explanation of its etiology.

From time to time ever since the higher development of bacteriology, announcement has been made of the discovery of an influenza bacillus, but these heralds have shared the fate of the many other contemporary ones relating to the specific cause of scarlet fever, measles, small-pox, et cetera. And not until 1892 when **Babes** and **Pfeiffer** essayed to solve the mystery by definitely isolating and demonstrating an influenza bacillus, and its cultures, did the profession hope for relief from its perplexity. These bacilli are described as very small and morphologically similar to some of the diplococci and the bacilli of mouse septicemia. They seem to be difficult of cultivation and of low vitality. The observations of **Pfeiffer** were confirmed by **Conan**, **Kitasato**, **Cornil**, **Pfuhl** and others at the time. Indeed **Pfeiffer** claimed to have cultivated these bacilli and produced identical symptoms of the grippe in the lower animals by inoculation. Notwithstanding this work, however, the discovery of **Pfeiffer**—welcome as it was—does not seem to have been generally accepted and adopted according to the recent writings of clinicians and pathologists, for nearly all authorities seem to hesitate in accepting the **Pfeiffer** bacillus as the true specific cause of the grippe, or even influenza. **Delafield** and **Prudden** say regarding it:

"On the whole, we can only say at present that while the occurrence of the above described bacillus in influenza is interesting and apparently significant, we cannot yet definitely regard it as of established importance in the etiology of the disease."

Hence, I suppose we are doomed to await still further developments in bacteriology before we shall have the pleasure of knowing just what the specific cause of the grippe is; and in the meantime we may console ourselves with further speculation, and ponder on the words of **Lord Burke**'s Mustapha:

"Experience wounded is the school
Where man learns piercing wisdom out of smart."

Among other striking features of the grippe is the insidious development of fatal complications even among the previously healthy—such as pernicious pleuro-pneumonia, or pneumonia, meningitis, insanity, peritonitis, hepatitis, et cetera. The pulmonary lesions, as you know are especially prominent, and muster many rapidly fatal cases in nearly every epidemic. They are seldom graded or typical, but atypical. One peculiarity of such cases, which sometimes escapes notice, is the initial latency and subsequent rapid fulmination of the lesions which, spreading over both lungs, gives the unmistakable picture of almost complete vaso-motor paresis. I have frequently seen this fulminating relapse occur unexpectedly just at the verge of supposed convalescence, and the patient would succumb in from forty-eight to seventy-two hours after the beginning of such exacerbation. All the crises attending these cases are generally formidable. The cerebral form, which so closely simulates epidemic cerebro-spinal meningitis, has not been so prevalent in the latter as in the former epochs of these epidemics; but a form of concurrent or sequential neurasthenia was quite prevalent in New York, London, and Berlin, during the rage of the disease in 1891 and 1892. Also in New Orleans during the beginning of the epidemic of 1889. I have seen but few cases of renal disease recorded as coincidently depending upon the late series of epidemics. The treacherous character of the grippe is now so generally understood that but few practitioners of sagacity dare to give an unguarded prognosis of a given case. Indeed, with the majority of physicians, the evil possibilities of the case are always uppermost in the mind, while crises and complications are always objects of solicitude.

The sequalæ of the grippe may be said to be legion, and their abiding time indefinite, for like a ship which has braved the storm or survived the rocks, the victim of the grippe is veritably more or less of a physical wreck for days, weeks or months after the attack. Perhaps the most common of all the sequels to this disease is pulmonary phthisis. Until lately, I accepted with great reluctance and incredulity, the patients' version of the origin of his pulmonary disease in the grippe; and, although many times such a clinical history may have no foundation in fact—and is but a scapegoat—yet, I have found that the more closely this point was followed by practical investigation, the more firmly established has become the evidence that a large percentage of cases of phthisis pulmonalis have really had thier origin in the grippe or influenza. It will be found curiously interesting indeed to learn how many cases can be reasonably traced to this cause. I confess that on account of the last four or five years' experience, I have become more apprehensive about influenza or the grippe multiplying the cases of phthisis pulmonalis, than of the tubercle bacillus doing so. Some surviving cases present various local paralyses of the larynx or other organs of special sense similarly to diphtheria; and quite a number will show for months various indefinitely marked functional disturbances, which are attributable, undoubtedly, to vaso-motor incoördination. Cardiac lesions are not recorded as very common excepting in those persons who have previously suffered from rheumatism, asthma, or some chronic renal or hepatic disease. However, such a sequel is far from common—as might be expected—when the attack has been severe enough to tax for any length of time, the respiratory or circulatory mechanism, and especially so among the intemperate.

As might be anticipated, the subject of the therapy of the grippe and influenza is a vexatious one. Volumes on remedial measures have been written for use in combatting the diseases in question. Considering first the grippe, I think everyone here will sustain me in the assertion that depressing remedies of all sorts ought to be used with the utmost caution. Undoubtedly many lives have been sacrificed to the indiscriminate use, by people, of such vaso-motor depressants as antipyrine, acetanilid, pilocarpine, tartrate of antimony, et cetera. It is a great question in which I share, whether or not pyrexia—which is undoubtedly a salutary reactionary process for protecting the economy—ought to be very much interfered with. Certainly there must be less danger of internal congestion by letting nature wrestle alone against the embarrassed innervation and circulation than by adding to the struggle through debilitating the vital forces in any way. What can be gained by attempting to quiet a vital action which is naturally excited by a struggle to eliminate or overpower a deadly toxine? In ordinary influenza, however, moderate doses of such particular remedies as aconite may be of assistance because the system is not overwhelmed, but in cases of the genuine grippe I do not believe any agent should be administered which will in the least way inhibit any action of the sympathetic nervous system. It were better to modify fever by judicious bathing. On the other hand, it does not seem wise to overstimulate patients, in the early stages, and thus unnecessarily unlock or waste the forces of a struggling nervous system. It seems to me, that first of all, *absolute rest, in bed*, should be enjoined, no matter how confident the patient may feel of throwing off the attack, for, as said before, the disease is insidious—a snake in the grass, as it were—and we cannot afford to take any chances by allowing nature to expend any force to do anything unnecessarily, until we know that the struggle on hand is over. This it seems to me is a cardinal point. I am sure that every one present has seen the fatal consequences of persons who, suffering with the grippe, have gone out too soon, or, with bravado, been sitting up or moving about too much, resuming their occupations or doing other imprudent things which at the time may have seemed trivial. Therefore, I believe that absolute rest, warmth of apartments, simple diet, and quiet surroundings for the mind and body are necessary factors of treatment. Of remedies, there is not time to mention more than a few. I would respectfully urge, as most useful, quinine in moderate doses frequently repeated; belladonna, phosphorus, ammonia, alcohol, and strychnia. Of these, I regard phosphorus (when well bone) and quinine as the "sheet anchors." The former will be found useful from the beginning. Codiene or morphia are sometimes preferable to belladonna. Alcohol in deflnite doses should be used judiciously, I believe, throughout the course of the attack. Digitalis—excepting in cases of venous turgescence—seems to me of doubtful value either in small or heroic doses. Mineral waters, and mild depurants are often valuable aids. Later on, when the sympathetic nervous system is well-nigh overwhelmed, the administration of remedies is positively useless, even sometimes when given hypodermically. In some cases under my observation when the vessels of the lungs seemed to be filling up, and the heart scarcely able further to meet the strain, although the mental faculties were retained, I have administered as much as one-twentieth, fifteenth, or one-tenth of a grain of strychnine, hypodermically, alternately too with digitalis or nitro-glycerine or ammonia, at intervals of only an hour or two, for several times, without producing the slightest sign of the physiological action of the drugs. Therefore, when this stage of the process is reached, medical art is soon hopelessly impotent. The sympathetic system—even to the medulla oblongata, the pivot of life—is then practically dead. And at such time whatever may be offered will not stay the ebbing life nor the flitting soul from taking its journey to the world beyond. It will be as SHAKESPEARE says:

> "Your gift is princely, but it comes too late,
> And falls like sunbeams on a blasted blossom."

INTESTINAL ANTISEPSIS.*

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IT must be admitted that our knowledge of the laws that govern the various processes of digestion needs to be extended very much before we can claim it is complete. Within a comparatively short time investigators have found that the intestinal canal is not simply a test-tube, with walls of parchment, through which fluids pass by osmosis. On the other hand they have come to look upon it as an organ within whose cavity food products are elaborated by physical and chemical actions that are most complex; and the walls of which, most wonderful of all, have within themselves, in part at least, that mechanism or force that forms from unknown products the physical basis of life—the living cell.

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* Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

Viewed, then, from this stand-point, how important is it that a process so intimately connected with the physical structure and functional activity of every organ of the body should be allowed to proceed with the least interference possible. Notwithstanding this how many of us would be willing to say he had seen, or ever expected to see, a human adult in whom digestion and assimilation was absolutely perfect?

The factors that influence in a deleterious manner this process are very numerous. Among them may be mentioned inherited weaknesses, idiosyncrasies, modes of living, character of food and methods of its ingestion, presence within the intestine of microörganisms and so forth. A complete list would be impossible. But if we had before us a complete enumeration of the conditions that could cause this interference, whatever might be the power of each to injure, the greatest of all would be that of the microbe. Great numbers of these organisms are always present in the intestines and many species of them are harmless. Some authorities think they may assist in normal digestion. Be this as it may, some often are present that are the cause of fermentations and putrefactions with accompanying ptomains and in this way become practically active poisons. Another class of microbes is the cause of specific diseases such as typhoid fever and cholera.

LEGENDRE, who has done much original work on this subject, says: "The physical and chemical conditions which prevail in the digestive tube realize admirably those which experience has shown to be favorable to the culture of microörganisms (a constant temperature of 100° Fahrenheit, humidity, relative stagnation and periodical arrival of fermentable matter). The digestive tube is the paradise of microbes. Thus in the world of microbes harmless, useful and disease-breeding species live side by side. The species which are habitually harmless when they do not develop in great numbers may become injurious by excessive multiplication. As for species truly pathogenic, they are probably present only intermittently."

The mischief ordinarily caused by these microörganisms depends upon the fact that their presence is necessary to effect fermentation and putrefaction. If by any means they can be removed or rendered inactive these undesirable changes cannot take place. Nature has provided for the prevention of these fermentative and putrefactive changes by making the secretions of the intestines and their connected glands of an antiseptic character. The relations existing between these secretions and undue activity on the part of the microörganisms may be compared to the relationship which exists between the pneumogastric nerve and those nerves that accelerate the heart's action. Such an explanation of the protective character of the fluids of the intestine would call for putrefactive changes of the contents of the intestine whenever the natural fluids should be impaired or reduced in quantity, or when microörganisms were introduced that were unusually virulent in character or were in overwhelming numbers. These are exactly the conditions that do prevail. On the other hand true digestion shades so gradually into putrefaction that an exact dividing line between the two processes cannot be laid down.

That disorders of various organs of the body result from absorption of products of putrefaction within the intestine is a matter of daily observation. The skin, liver, kidneys and nervous centres are the organs that seem to suffer most. A few years ago a professor of nervous diseases in one of the great medical colleges of this country said that, in his opinion, every case of so-called nervous prostration was due to some form of indigestion.

W. W. Johnson, Professor of Medicine at the Columbian University of Washington, describes the effects of the absorption of that common product of intestinal indigestion, sulphuretted hydrogen, as follows: "Anemia and waste follow directly from interference with the digestion and absorption of fats and starch in the intestine, but the most delicate, the most easily disorganized solid of the body, the nerve-tissue, is the first to feel and to manifest its wants of natural supply. And so the dyspeptic whose intestine is at fault becomes depressed in spirits, hypochondriacal, absorbed in the contemplation of his sufferings, analyzing them and referring them to the most serious organic changes. There are sleeplessness, disturbing dreams, the habit of waking at a fixed hour, dizziness, uneasy sensations or pain in the head, and disturbances of the special senses, as buzzing in the ears, muscæ volitantes and attacks of blindness. Headache assumes often the form of hemicrania: it may be in the forehead or about the eyes. Attacks of vertigo and sensations as if the ground were rising beneath the feet accompany intestinal flatulence. Confusion of thought, loss of power of application and mental inertia are frequent sources of anxiety. Paralysis has been noted as following indigestion. Epileptiform convulsions and milder epileptic attacks can be traced to undigested matter in the intestine. Various modifications of general sensibility also happen: there are pains in the back and limbs, hyperesthesia and anesthesia. An inaptitude for exertion, especially for mental labor, forces the boy to give up school and college life. Successful careers are abandoned by men who, at the cost of neglecting all the rules of health, have succeeded for a brief period in passing their fellows in the race. Sudden attacks of fainting have been noted, with very grave collapse. These are the effects upon the nervous centres of the absorption of sulphuretted hydrogen.

Of course all these symptoms will not be present in a single individual. For this we may be truly thankful. There are some bright spots in the practice of medicine.

The treatment of the various conditions above described is essentially of an antiseptic character. This paper will deal with this subject under three heads or classes.

Class I.—Measures looking to a lavage in whole or in part of the digestive tract.

Class II.—Measures taken to increase the natural protective secretions of the digestive tract.

Class III.—Internal application of remedies antiseptic in themselves.

CLASS I.—LAVAGE OF THE INTESTINAL CANAL.

A little more than a year ago Doctor A. de Genersich, a Hungarian physician, carried on a series of experiments for the purpose of establishing the possibility and the effect of lavage of the whole digestive tract. He began by introducing a tube into the esophagus of a dead human body and allowing fluid to pass into this from different elevations. He found that after three to five quarts had passed in the stream suddenly stopped and a force sufficient to rupture the stomach and small intestine would not start it again. He was unable to explain this obstruction. He next introduced the fluid per rectum and found that the current from a receptacle elevated two to three feet flowed continuously through the whole digestive canal and out at the nose and mouth.

The large intestine of the adult, he found, would contain about three quarts, and to fill the whole canal and stomach required about eight or nine quarts. Afterward, introducing the fluid at the rectum, he washed out the whole intestinal canal and stomach of a man suffering from cholera and with most beneficial results. Probably the most striking thing about these experiments is the fact that a current of water cannot be made to pass the ileo-cecal valve passing downward, but can easily be made to do so when flowing against the grain, so to speak.

About this same time M. DURIAC, a French physician, carried on a similar line of experiments. At an asylum for weak-minded children an epidemic of persistent fetid diarrhea prevailed. Eleven of these unfortunates were subjected to lavage of the whole intestinal tract. Creolin in some cases, and lactic acid in others, was used as an antiseptic. The fluid was introduced at the rectum and readily forced upward to the stomach. The diarrhea ceased with a single injection in most of the cases, a few only requiring a second application of the remedy some time after. In a case of typhoid fever a daily injection of five quarts of an antiseptic fluid gave beneficial results. Both these investigators recommend that, in this form of antiseptic treatment, only fluid enough be introduced to reach the stomach, which amount is easily found by percussion. They say by so doing the fluid will begin to flow downward as soon as the inflowing current is stopped and vomiting be avoided entirely. Sometimes during the injection colic comes on. When this happens it is only necessary to stop the current for a few moments and the pain will cease.

The great value of these experiments lies in showing that a complete antiseptic washing of the whole digestive tract is practicable and that removal of all contents, including microörganisms, is not detrimental to health. As a therapeutic measure in private practice it probably never will be much employed.

CLASS II.—STIMULATION OF THE NATURAL ANTISEPTIC SECRETIONS OF THE DIGESTIVE TRACT.

Any measure that tends to improve the general bodily health is indicated here. Thorough mastication of food is of the greatest importance. By this the food is finely divided and the shreds of animal tissue separated, so that the saliva, the amount of which is increased by the act of chewing, can mix intimately with the mass.

Stomach digestion also should receive attention. Much can be done by simple stimulation of the glands of the stomach walls. Bitter tonics, lavage, et cetera, should be employed when indicated. The more complete the work of the saliva and the gastric juices, of course the less the danger of putrefaction in the intestine.

Of the fluids that are secreted by the liver, pancreas and intestinal glands, and which together have so important and complicated a duty to perform, much of which is unknown, it would be difficult to say which is the most important. The accessibility of the liver and the frequency with which its secretion is kept from aiding in the digestion of the intestine have given opportunities for observations here that have been wanting in the cases of the pancreas and intestinal glands. All agree that one of the chief characteristics of the bile is its great antiseptic power. É. TROUESSART, a distinguished investigator of Paris, says: "The bile is an energetic, antiputrid agent, and opposes the microbian fermentations which may arise in the intestines from the presence of alimentary residue." This may be taken as an expression with which practically all physiologists agree. The importance then of having a full supply of bile in the intestine when needed is apparent. The text-books give a list of remedies that are supposed to cause an increased flow of bile from the liver. Of these ipecac, iridin, sanguinarin and podophyllin are the ones most commonly mentioned. Calomel and blue pill, formerly supposed to stimulate the liver, have a sedative action. This is probably brought about by their power to clear the duodenum of its contents and by so doing prevent acrid material from being absorbed and carried to the liver. They both also have strong antiseptic qualities. There is another remedy for increasing the flow of bile into the intestine which in my own experience is easily chief of this class of remedies. This is olive oil. To the late DOCTOR PITCHER of this city has been ascribed its use. To be effective it must be used freely. Not less than eight ounces should be given within twenty-four or thirty-six hours. To a majority of people this remedy is a pleasant one. It is no uncommon thing to have a patient take direct from the bottle a whole pint within the prescribed time. To some, however, it is distasteful and when taken near meals causes a disagreeable belching of gas. In such cases it has been my custom to direct that from two to three ounces of the oil be suspended in a half ounce of a weak mixture of whiskey and water and the whole taken one hour before each meal and at bedtime. Water taken within one hour after the oil sometimes causes eractations and should be avoided. My belief is that with these directions followed it will be a very rare thing to find a person who cannot take the oil.

However large the amount taken it is unusual to have it cause any marked catharsis. One of its chief, if not the chief effect, seems to be to render the bile more limped or watery. This is shown by the fact that practically it never fails to relieve hepatic colic resulting from inspissated bile clogging the common bile duct. It was for this purpose that DOCTOR PITCHER recommended it. The power to do this would explain its action in increasing the flow of bile from the liver; for, by washing out all the minute bile ducts by a process of rendering more liquid their contents a considerable quantity of bile should be brought down and the passages left free for more to follow. Whatever be its action it certainly does, in some way, relieve intestinal flatulence and colic and have a beneficial effect upon those symptoms that are ordinarily ascribed to the absorption of the various products of indigestion.

CLASS III.—INTERNAL ADMINISTRATION OF REMEDIES OF AN ANTISEPTIC CHARACTER.

The list of these remedies is a long one and is growing rapidly. This fact alone would seem to show that no one had yet been found that was entirely satisfactory. Among them may be mentioned cathartics of all kinds, particularly those containing mercury, charcoal, bismuth, quinine, carbolic acid, iodine, iodoform, boric acid, salicylic acid, salol, naphthol—alone or in combination—dermatol, et cetera. Of these probably a combination of benzoic acid and naphthol beta—called benzo-naphthol is one of the most valuable. This drug is not modified by the secretions of the stomach. In the alkaline fluids of the intestine it breaks up into benzoic acid and naphthol beta. Thus it is an intestinal antiseptic pure and simple. The benzoic acid stimulates diuresis and on this account is of additional value. It may be given in daily doses of seventy-five grains to an adult. Recently subgallate of bismuth commonly called dermatol has been much praised by numerous physicians.

The treatment of diseases due to the presence in the intestine of a specific microörganism comes in this class. An abortive treatment of typhoid fever has been recommended by DOCTOR WOODBRIDGE, of Youngstown, Ohio, which consists of free catharsis and the frequent administration of small doses of calomel, guaiacol, menthol, thymol and eucalyptol in definite proportions. Parke, Davis & Company of this city combine them in the form of a tablet. DOCTOR WOODBRIDGE reports a marvelous success from this treatment. Let us hope he can continue these good reports long enough to establish the treatment. A valuable form of treatment of typhoid fever that has come under my observation consists of one or two drops three time a day of a mixture of tincture of iodine two parts and carbolic acid one part.

The object of this paper has been in a general way to call the attention of the members of this society to a therapeutic measure that does not seem to be considered as highly as it deserves. The great benefits that have arisen from the general application of the principles of antisepsis and asepsis to surgical and obstetrical practice, certainly foster the hope that a further benefit would arise if these principles should be applied carefully and scientifically to the digestive errors of the intestinal canal.

DIPHTHERIA: SYMPTOMS AND DIAGNOSIS.*

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GYNECOLOGIST TO BUTTERWORTH HOSPITAL AND THE U. B. A. HOME AND HOSPITAL.

DIPHTHERIA is an acute infectious disease, characterized by local manifestations in the throat, and caused by the action of the KLEBS–LOEFFLER bacillus. It attacks especially the tonsils, palate, and pharynx, but often invades the nose and larynx. Under this name have hitherto been included etiologically distinct affections. In general, however, it may be said that the cases produced by the KLEBS–LOEFFLER bacillus possess clinical, pathological, and bacteriological characteristics which serve to distinguish them from other forms of disease which in the past have been called diphtheria. And now, since the advent of antitoxin, it is still more desirable to avoid using the word diphtheria to designate other diseases than that produced by the KLEBS–LOEFFLER bacillus. As KOSSEL says, we should give to the word the old meaning assigned to it by BRETONNEAU, who applied the name diphtheria to a specific infectious disease, and not to a special form of anatomical change.

It is now admitted by most authorities that diphtheria is primarily a local affection, although the first symptoms noted are often of a general nature, as fever, headache, malaise, et cetera. In some cases, however, typical throat symptoms are present at the outset, such as pain in swallowing, redness and swelling of the mucous membrane of the tonsils and palatine arches, and white punctate deposits upon the tonsils which may soon coalesce and cover the entire throat. More or less tenderness and swelling of the submaxillary glands is always present. The local processes may vary in degree from simple catarrhal redness to the formation of a thick membrane with extensive necrosis of the underlying mucosa.

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*Read before the MICHIGAN STATE MEDICAL SOCIETY, at Bay City, June 6, 1895.

SCHMIDT divides the local manifestations of diphtheria into three classes:

The first presents a great similarity to follicular tonsillitis. In the mouths of the follicles are seen pea-sized or larger, white or yellowish-white deposits, which remain isolated throughout the attack. This exudate disappears on the second or third day, and the patient is soon well, with or without treatment, with the exception of a pronounced general weakness which often remains a few days longer. The process is almost always bilateral.

The second form is that of membrane formation. This is produced by union of the isolated deposits of the first class, or, in severe cases, appears primarily. In addition to the patches on the tonsils, we find extensions to the faucial pillars and uvula. Less frequently the posterior pharyngeal wall and the mucous membrane of the mouth are involved. The neighboring patches of pseudomembrane may unite and become very thick.

The third or gangrenous form has the same mode of origin as the first or second form, and is attended by pronounced swelling of the neck and dark discoloration of the membrane. The submaxillary glands may be enormously enlarged. In case the patient recovers, extensive necrosis of the mucous membrane of the throat takes place.

On the other hand the local symptoms of diphtheria may be slight. The patient may complain but little of the throat; yet the fever is high, the tongue dry, the intellect dull, and delirium or convulsions may set in. The symptoms partake more of a general nature, and collapse, with paralysis of the muscles of deglutition, may appear in from seven to nine days. The fetor of the breath upon which so much emphasis has long been laid may be entirely absent. In other cases it may be very pronounced, especially when a gangrenous condition of the throat is present. As the result of the absorption of septic matter the temperature may be high. But it may be low, and is sometimes abnormal.

The respiratory organs are frequently involved, more especially the nose. In the latter case, a yellow or reddish serous discharge is present. The nose becomes occluded, sleep is interfered with, and the tongue becomes dry. The involvement of the larynx varies with the epidemic. Complete loss of voice may be due to pseudomembrane between the vocal glands, or to subglottic swelling. An important symptom of laryngeal involvement is dyspnea which at first may be intermittent, but later becomes constant. The extension of the pseudomembrane to the bronchial tubes is shown by accelerated breathing and a peculiar metallic character of the respiratory sounds (SCHÜRMAYER). Pneumonia may result from extension of the membrane into the alveoli or from expiration of bronchial secretions. When the larynx is involved the cough has a characteristic croupy tone.

Another complication of diphtheria is myocarditis, which may end in death, or in fatty degeneration of the myocardium and recovery. **Leyden** considers its cause to be the presence of bacilli in the muscles of the heart. But this assumption, **Schürmayer** says, is not necessary. Myocarditis may follow other poisonous processes, and there is no reason for supposing it cannot result from absorption of the ptomains of the **Klebs–Loeffler** bacillus. **Schmidt** thinks it may be due to the excessive fever sometimes present, or to the diminished oxidation of the blood caused by stenosis of the respiratory passages.

The symptoms of implication of the heart are a pulse of 100 or over in adults, and 120 in children, and change of the pulse-rate upon slight movements of the body. **Baginski** designates as further symptoms decrease in tension of the pulse, a small weak pulse, erythema, and symptoms of general congestion of the body with cyanosis and coolness of the extremities. At the same time the appetite completely disappears, and vomiting with precordial distress and pain may set in. Auscultation may show feeble heart sounds, disappearance of the first sound, occasional reduplication of the sounds and gallop rhythm. The liver swells and becomes very hard.

The stomach and intestines are but seldom disturbed in diphtheria by the bacilli themselves; but their functions are frequently deranged by the fever and by the toxines of the disease.

Disease of the kidneys is recognized by the presence of albumen in the urine. Whether this is due to the influence of the fever or to the ptomains is not determined. The latter is most probable. Pronounced parenchymatous nephritis is attended by vomiting and diminution of the urinary secretion.

One of the most peculiar sequels of diphtheria is paralysis of peripheral nerves in various parts of the body. Even in light cases this sometimes appears before the patient has recovered from the attack itself. The muscles most frequently involved are those of the soft palate and deglutition. The muscles of the larynx and eyes are rarely involved. Loss of the patellar reflex is very common and a severe degree of ataxia may be present in the lower extremities. Sensation in the paralyzed parts may be absent or perverted.

The more severe the primary disease in the pharynx, the earlier appears diphtheritic paralysis. It is usually accompanied by albuminuria, or nephritis with casts. When the disease in the pharynx is less severe, and not of a gangrenous or septic form, the paralysis sets in later and slower, but is apt to become extensive and be especially dangerous on account of the tendency to involve the diaphragm. The latter is said to be more frequent than is generally supposed. It is indicated by aphonia, a subdued hoarse cough, difficulty in expectoration, dyspnea, thoracic respiration, and sunken abdomen. With the onset of bronchitis and pneumonia the dyspnea increases, and may be followed by asphyxia and sudden death.

Hemiplegia may occur as a sequel of diphtheria, though rarely, it not having been present once in thirty cases of diphtheritic paralysis reported by **Baginski**.

The course of diphtheria is very variable. The local process in the throat may be slight, the patches may disappear, and the process end in complete recovery in a few days. Or such an amount of ptomains may be absorbed from the throat as to cause speedy death. The more prolonged the disease, the more unfavorable is its prognosis. The difference in its course depends upon the variableness in the quantity and virulence of the diphtheritic bacilli; upon the presence of the bacteria, either pathogenic or saprophytic; and upon conditions of individual predispositions which at present are not well understood. Putrefactive processes in the diseased mucous membranes in the nose and throat influences the course of the disease unfavorably by increasing the virulence of the **Klebs–Loeffler** bacillus, and by the production of ptomains, whose absorption adds to the already existing septic processes.

According to **Schmidt** the prognosis depends pricipally upon the epidemic. In some epidemics ninety per cent. of the cases have died. A malignant epidemic may suddenly change to a mild one from unknown causes, and, on the other hand, **Aub** tells of an epidemic in his practice which had long been very mild, but which suddenly assumed a most malignant character. The prognosis is most unfavorable in children under three years of age, yet the condition of the patient when taken ill, as well as the possibility of administering suitable nourishment throughout the disease are important factors in determining the final result.

Siegel–Stuttgart, whose opinion was based upon a close observation of three hundred cases of diphtheria, makes a favorable prognosis—

(1) When the disease is slow in origin, development, and spread, and proceeds from a follicular origin.

(2) When the membrane has a white or grayish-white color.

(3) When upon removing the membrane deep injury to the underlying mucous membrane does not result.

(4) When the uvula remains free.

(5) When the pseudomembrane is cast off in large flakes, be it quickly or slowly.

(6) When the discharge from the nose, if invaded, is thin and watery.

(7) When the glandular enlargement arises slowly and remains unilateral.

(8) When, in a severe case, the enlarged glands are diminishing in size.

His prognosis is unfavorable—

(1) When the pseudomembrane appears in a few hours and spreads rapidly.

(2) When the membrane is yellow in color and coated with dirty, greasy debris.

(3) When removal of the pseudomembrane produces considerable injury to the mucosa beneath it.

(4) When the uvula is involved.

(5) When rapid return of the membrane follows its removal.

(6) When the nasal discharge is fetid, thick and purulent.

(7) When the glandular swelling appears suddenly and increases rapidly.

(8) When great fetor of the breath is present.

(9) When there is great hoarseness.

(10) When stenosis of the larynx appears.

(11) When during or after a tracheotomy, pseudomembrane must be removed.

The prognosis is always unfavorable when diphtheria is secondary to any other disease.

The diphtheritic process is a special form of necrotic inflammation. When a mucous membrane is inflamed and a pseudomembrane consisting of fibrin, leucocytes, et cetera, forms upon its surface, it is called a croupous inflammation. The mucosa itself remains intact, its epithelium is not abraded. A diphtheritic inflammation, on the other hand, is one in which the fibrinous exudate is poured out, not only *upon* the surface of the mucous membrane, but also *within* it. The rapid coagulation of this exudate interferes with the circulation in the mucous membrane to such an extent that portions of it become necrotic. A croupous inflammation, as SCHÜRMAYER says, bears the same relation to a diphtheritic inflammation as surface suppuration does to purulent infiltration. A *croupous* membrane is a thin pellicle of a bluish-white color in contradistinction to the thick yellowish velvety appearance of the *diphtheritic* membrane. The edge of a croupous membrane can be easily separated from the parts beneath leaving them intact, while a diphtheritic membrane cannot be removed without the rupture of blood-vessels or the tearing of tissue.

On rare occasions, however, we meet with cases of fibrinous exudate which seem to possess the characteristics of both processes, membranes which are on the dividing line between croup and diphtheria, and clinically it is sometimes impossible to differentiate the pseudomembrane of the KLEBS–LOEFFLER bacillus from that produced by streptococci, staphylococci, or pneumococci. In these cases we must make a bacteriological examination, or treat them as diphtheria. These croupous anginæ, as a rule, are isolated cases, run a rapid and favorable course under any mode of treatment, and are never followed by paralysis.

BAGINSKI reports ninety-three cases which from ocular inspection of the throat and from clinical symptoms were diagnosed as diphtheria. Within twenty-four hours KLEBS–LOEFFLER bacilli were found in sixty-eight of the cases by the aid of cultures. Of these forty per cent. died. Of the remaining twenty-five cases in which the specific bacillus was not found, only one died, and that from a complicating disease. On the other hand, it would be improper to exclude diphtheria in every case in which the specific bacilli are not found upon the first examination, for they may easily be overlooked. FEAR found KLEBS–LOEFFLER bacilli in each of thirty-eight cases of diphtheria examined bacteriologically, and ROTH found them in twenty-one out of twenty-two cases. The negative result in the one case was afterwards shown to have been due to an accident. But that the bacilli may occasionally be difficult to find is shown by a case reported by BAGINSKI. Relying upon the negative result of a bacteriological examination, a suspected case was placed in the medical ward. Eight days later, on account of a suspicious eruption, the child was transferred to the scarlet fever pavilion. Two days later she developed diphtheritic patches on the tonsils and pharynx, and an extensive epidemic of diphtheria followed in the medical and scarlet fever wards.

One source of error lies in the fact that the bacilli are not equally numerous in all cases. In diphtheritic angina, with fever and swelling of the glands of the neck, the specific organisms are much less numerous than in cases with membrane formation. These cases are by no means uncommon, and during an epidemic of diphtheria all cases of catarrhal angina in exposed persons should be isolated until diphtheria is excluded.

As a rule, however, I have experienced but little difficulty in finding the specific bacilli and if, after repeated examinations, they are not found, we cannot

case to be diphtheria. In these non-diphtheritic sore throats, with
of pseudomembrane, we find streptococci, staphylococci, or
AR reports six cases, which were not to be distinguished from
ymptoms, in which he found streptococci in two, and

seudodiphtheritic bacillus can be eliminated from
ical work. Roux and Yersin have proven that it
Klebs–Loeffler bacillus, although possessing
Morphologically it cannot be distinguished
reason for calling it a pseudobacillus is
und in the throats of healthy children.
bacilli have been found in the throats of
from diphtheritic membrane show different
L has shown that in severe cases of diphtheria
side by side with the most virulent. Moreover, one
other in artificial cultures, and *visa versa.* It is said
us will not turn bouillon acid; the same is true of those
ebs–Loeffler bacilli. Hence, for diagnostic purposes, these
be considered true diphtheritic germs which, if planted upon
i, may give rise to the most severe forms of diphtheria.

HYSTERECTOMY FOR PUERPERAL INFECTION.*

By REUBEN PETERSON, M. D., Grand Rapids, Michigan.
FELLOW OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS, AND MEMBER OF THE CHICAGO GYNÆCOLOGICAL SOCIETY.

In spite of the diminished mortality from puerperal sepsis brought about by the introduction of antiseptic and aseptic measures, many thousands of women die annually from puerperal septicemia. Outside of the large maternities, where favorable results have been obtained on account of the perfect technique, there still exists a large amount of septic infection following abortion or labor at full term. If to this be added the sepsis arising from accidental and induced abortions it will be seen that no effort should be spared to perfect all methods of treatment for the relief of this condition.

A clear conception of the pathology and bacteriology in the birth canal is highly essential. Bumm describes two forms of endometritis, septic and putrid. The septic process may be localized and the germs shut off from the underlying tissues by a granulating zone or this zone may be absent and the pyogenic cocci be found in the lymphatics leading to the peritoneum. In septic endometritis fetid lochial discharges may be absent. In putrid endometritis decomposed material and necrosis of the epithelial layer is present in the uterine cavity. The granulation zone is also present and acts as a barrier to the penetration of germs and their products. The putrefactive focus within the uterus favors a development of toxines whose absorption into the blood causes sapremia.

Cases of puerperal sepsis may be divided into two classes:

(1) Where general infection predominates.

(2) When localized inflammatory deposits are present.

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*Abstract of a paper read before the American Medical Association at Baltimore on May 8, 1895.

The second class offers the best results from operative interference because the products of inflammation are shut off from the general peritoneal cavity, and the surgical treatment of localized abscesses is followed as a rule by good results. When the broad ligaments are involved in septic absorption, true pelvic cellulitis and abscesses result. When there is a general purulent peritonitis resulting from absorption of germs it usually proves rapidly fatal. All collections of pus in the adnexa or cellular tissue should be evacuated with the least possible delay, either by way of the vagina or by abdominal incision.

Can surgery prove of any avail in the other class of cases where absorption is taking place from the interior of the uterus by way of the lymphatics with a resulting general infection?

The cases of general infection are of two descriptions: (1) when the veins and lymphatics at the placental site are loaded with germs; and (2) when the presence of the granulating zone impedes further penetration of the cocci. In both the symptoms are those of general septic absorption. A dull curette should be used in intrauterine treatment to preserve the granulating zone. The treatment of these septic cases must be rigorous and thorough. The source of infection must be removed at once. Since differentiation of these two classes is almost impossible the use of the dull curette and packing should be employed in all cases. The main diagnostic symptoms are high fever, rapid pulse, possibly chills and the history of the case. If curetting and packing with gauze affords no relief within twelve or eighteen hours the only resort is removal of the uterus. If this be done early enough the patient may live. This radical procedure is not more radical than the disease is fatal if allowed to proceed unchecked. The removal of the source of the infection, if taken at an early stage, will be the means of diminishing the mortality of the cases. The more skilled the surgeon becomes in diagnosis and the more expeditious the treatment the better will be the results obtained.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, MARCH 4, 1895.

THE PRESIDENT, *pro tempore*, A. P. BIDDLE, M. D., IN THE CHAIR.
REPORTED BY LUTHER S. HARVEY, M. D., SECRETARY.

DISCUSSION OF PAPERS.

DOCTOR W. S. ANDERSON read a paper entitled "Syphilis and Carcinoma of the Larynx." (See future issue of The Physician and Surgeon).

DOCTOR HICKEY: I have been very much interested in hearing the paper of the evening, particularly as I have had the opportunity of seeing the cases which are reported. During the last day or so I looked up the recent literature upon the subject of intubation in chronic stenosis of the larynx, and from the reports of cases tabulated by observers in different parts of the work I would not agree with the pessimistic views expressed by DOCTOR ANDERSON. The consensus of opinion seems to be that the results of intubation in this class of cases are permanent and the relief afforded is lasting. It is recommended that the thread attached to the tube be left in position for some little time after insertion. Vulcanite is considered to be a more suitable material than metal for a tube which may be allowed to remain in the larynx for some days.

Doctor Maclean: I have only to say that I have listened with great pleasure and have learned a great deal. One thing I would like to enforce is the benefit to be obtained by pressure. Stricture in other parts tends to end in complete stenosis, while distension, if properly carried out, will relieve a large proportion of cases. I am impressed with the inutility of extirpation of the larynx for carcinoma. The large percentage of deaths from operation and the great liability to recurrence makes the operation inadvisable.

Doctor Gailey: I was very much interested in the paper and can add nothing to it. I was much impressed by the importance of intubation.

Doctor Tappey: I have had no experience with syphilis of the larynx. The operation of removal of the larynx strikes me as a very formidable one and one that would not promise to be very satisfactory. Considering the difficulty in removing all of the diseased tissue when the tumor is accessible and free from connections or comparatively so, we cannot hope to have much success in these parts.

Doctor Anderson: I have been very much interested in the discussion, and have gleaned many valuable hints from it. A word might be said, in addition, as to the value of laryngectomy in the treatment of malignant growths of the larynx. I hesitate to place my opinion against the large surgical experience of Doctor Maclean, but I feel that this operation has a place in the treatment of this serious disease. Given a patient with carcinoma of the larynx, we can give but one prognosis, certain death. If we can save even a small proportion of these patients by radical surgical measures, is it not a great advance in the treatment of this affection? The success of this treatment depends on early diagnosis and the prompt extirpation of all of the involved tissue. In studying a number of cases operated upon, we find that over forty per cent. die within two weeks, most of them either as a result of hemorrhage or of broncho-pneumonia. I believe that the mortality can be reduced by more attention to surgical details and improved technique.

EDITORIAL ARTICLES.

LITERARY DEGENERATES.

If there be any truth in Doctor Max Nordau's telling indictment of modern literature and art, as presented in his entertaining work on degeneration, the matter is one more for the attention of the physician than the moralist. The physician will be the one, if any, who "recognizes at a glance, in the *fin de siecle* disposition, in the tendencies of contemporary art and poetry, in the life and conduct of the men who write mystic, symbolic, and decadent works, and in the attitude taken by their admirers, the confluence of two well-defined conditions of disease with which he is quite familiar, degeneration and hysteria."

The pressure of modern life, the outstripping and overriding by invention of nature's capacity for adjusting organ to function, the growth of large towns and the worry of existence, have been potent causes in producing this pathological state. "Fatigue and exhaustion showed themselves in the first generation under the form of acquired hysteria and in the second as hereditary hysteria." The twilight mood in literature and art is therefore not a sign of progress; it is degeneracy.

NORDAU is a close follower of the LOMBROSO school. He not only believes in the physical stigmata of the degenerate, but for the moral insanity he finds so prevalent he claims two psychological roots, unbounded egoism and impulsiveness. These are the underlying traits in works of the mystics, egomaniacs and realists whom he cites in illustration of his theories.

In what does MAX NORDAU's indictment of modern literature actually consist? That it is impressionist, that it is characterized by emotional intemperance, that it manifests a distrust of objective perception, and places reliance upon purely subjective methods of mental analysis. All this is partially true but in the main MAX NORDAU's indictment is preposterous. That the cults which perpetuate a great mind's achievements often pass into extravagance is indubitable. Excrescences of this kind only demonstrate the fertility of the soil in which they take root. It is manifestly absurd to designate as degenerates a social pathologist like ZOLA, or an observer like IBSEN, whose vivid delineations of character mark him as the subtlest and most penetrating analyst of human motive living. It would be as reasonable to accuse a bacteriologist of mental perversion because he deems the phenomena of putrefaction to possess an interest surpassing that pertaining to the laws of development.

That a large number of unhealthy literary tendencies prevail is undoubted. The women who dissect their souls in the yellow book, and clothe the corpse of sensuality in alluring garments are perhaps the chief offenders in giving expression to these tendencies. The exposition of unaccustomed emotion, or the demonstration of the psychology of sexual passions may, however, be of some interest and not without use. The profound belief in original sin women display may eventually revive a healthy interest in the devil. The decline of positive instincts, and an equivocal perception of fundamental distinctions are after all the truest indications of a decadent faculty of judgment. Sinfulness and silliness singular as they may be cannot, however, in the end constitute persistent artistic motives, and though the twilight pass into gloom this will be pierced by the light of the lamp of truth.

EDITORIAL BREVITIES.

THE MICHIGAN STATE MEDICAL SOCIETY.

THE thirtieth annual meeting which occurred at Bay City on the 6th and 7th instant, while not as largely attended as desirable, nevertheless bore evidence of a vigorous condition of the organization. The number of old members present was equivalent to the usual representation, and the accession of new ones equalled the enrollment of previous years, but notwithstanding this flattering condition there are still many physicians in Michigan who should be identified with the society, and hence the meeting acted wisely in adopting the opportune recommendation of the secretary, that measures be inaugurated for increasing the membership. The papers were numerous and excellent, and although the deliberations of the general sessions and the sections were expedited with all possible despatch by **Doctor Walker** and the several Chairmen, yet limited time did not allow members the gratification of listening to all the numbers on the program. Several papers read at the meeting will be published in future issues of **The Physician and Surgeon**. The next meeting will be held at Mount Clemens.

A MONUMENT TO CORYDON L. FORD.

Doctor C. E. Stroud, of Sandusky, Ohio, has written urging that we advocate the erection of a bronze statue of **Professor Ford**, America's greatest anatomist, to be placed upon the campus at Ann Arbor. **Doctor Stroud** adds: "There is not a physician or dentist who heard this great teacher lecture, but that would consider it a great pleasure to contribute his mite—say one dollar—towards the erection." There is little doubt that while the way of the monument builder is often hard, **Ford's** name would be found a talisman with which to secure funds, and a statue to **Ford** could probably be erected before that of **Benjamin Rush** adorns the grounds of the Capitol in spite of thirteen years start by the latter project. **Doctor Ford's** name is one that certainly should be remembered in some permanent way. **The Physician and Surgeon** will gladly lend its aid in securing so desirable a project to the attention of the public, and will assist a committee in the promotion of the work.

THE MEDICAL PRACTICE ACT.

That a clerical error should be the means of ultimately defeating the bill providing for the regulation of medical practice in Michigan will be deplored by all advocates of the cause of higher medical education. The bill passed both branches of the legislature in proper form, but in engrossing a copy for **Governor Rich's** signature the error was committed of inserting the word "July" where "September" was indicated, and the Governor therefore declined to affix his name to the document. As the legislature had adjourned the matter could not be remedied, and notwithstanding a member of the Supreme Court positively stated that this slight mistake did not affect the legal aspect of the bill, still the chief executive persisted, and the profession and the people will be obliged to submit to existing conditions until two years hence when, let us hope, there will be no miscarriage of a measure for protection.

MEDICAL NEWS.

OFFICERS OF THE STATE SOCIETY.

At the annual meeting of the Michigan State Medical Society, recently held at Bay City, the following officers were elected for the ensuing year: President, Doctor V. C. Vaughan, of Ann Arbor; vice-presidents, Doctors Hugh McColl, of Lapeer, R. W. Erwin, of Bay City, F. B. Tibbals, of Detroit, and F. G. Novy, of Ann Arbor; secretary, Doctor Collins H. Johnston, of Grand Rapids; treasurer, Doctor William G. Henry, of Detroit; members of the judicial council, Doctors Henry B. Baker, of Lansing, Francis A. Rutherford, of Grand Rapids, and William T. Dodge, of Big Rapids. Officers of sections: Medicine—chairman, Doctor David F. Stowe, of Bay City; secretary, Doctor A. P. Biddle, of

Detroit; orator, Doctor H. M. King, of Grand Rapids: Surgery—chairman, Doctor D. Milton Green, of Grand Rapids; secretary, Doctor A. E. Bulson, of Jackson; orator, Doctor C. H. Baker, of Bay City: Midwifery and Gynecology—chairman, Doctor E. G. Minar, of Bay City; secretary, Doctor J. B. Whinnery, of Grand Rapids; orator, Doctor Reuben Peterson, of Grand Rapids. The election of president and secretary was by ballot, no nominations having been made. The whole number of votes cast for executive officer was 139, distributed as follows:

L. E. Best	1	
Hugh McColl	66	
V. C. Vaughan	72	—139

The whole number of votes cast for secretary was 133, of which Collins H. Johnston received 124. An amendment was made to the Constitution requiring that nominations for the offices of president and secretary be made in open session on the first day of the annual meeting in order that members may know who are candidates.

THE ABOLITION OF A PROFESSORSHIP OF PATHOLOGY.

THE Chair of Pathology has been abolished at the University of Michigan. Some time ago it was announced in the daily press that this action had been taken by the Board of Regents, but little credence was placed in the report owing to the importance of the chair and the eminence of its occupant. Recent developments, however, have corroborated the newspaper account. Professor Heneage Gibbes will be retired at the close of the present collegiate year, the Chair of Pathology will be consolidated with that of Practice, and the two subjects will be taught by one professor and an assistant. It is to be regretted that this practical branch, as an independent entity, has been eliminated from the medical course. Doctor Gibbes sent a communication to the Regents asking the reason for making this change but the information was denied. It would seem that were economy the desideratum expenses might, with greater propriety, be curtailed in quarters where less practical instruction is afforded the students. It is the unanimous testimony of undergraduates that the pathological laboratory is the only complete laboratory on the campus, and as a pathologist, Doctor Gibbes' ability is recognized throughout the world. It now requires one professor and two assistants to dispense pathology didactically and practically, the professor delivering all lectures and personally instructing the students in the laboratory, the assistants making the necessary preparations. It is understood that under the new régime the demonstrative course will be conducted by the assistant, who will spend the summer in Germany preparing for the position, and that the professor will discourse upon the subjects of Practice and Pathology in the lecture room.

THE STATUS OF THE HOMEOPATHIC QUESTION.

NOTWITHSTANDING both branches of the legislature passed the bill providing for the removal of the Homeopathic College to Detroit, and the endorsement of the measure by Governor Rich, still the Board of Regents decline to establish the school in that city. It is held by the Board that, being a constitutional body, they have as much power in the matter as the legislature, and the

Supreme Court will therefore be invoked to decide the legality of the legislative act. In the meantime the Regents are reorganizing the Homeopathic College with the intention of continuing business at the old stand on the campus. The following gentlemen have been appointed to the new faculty, but all have not yet signified their acceptance: Doctor O. R. Long, of Ionia, professor of therapeutics; Doctor Oscar Le Seure, of Detroit, professor of surgery; Doctor R. S. Copeland, of Bay City, professor of ophthalmology and otology; Doctor S. G. Milner, of Grand Rapids, professor of materia medica. It is understood that the deanship will be tendered Doctor Le Seure.

DYING DECLARATIONS IN PROSECUTIONS FOR CRIMINAL ABORTION.

The legislature of Pennsylvania recently passed the following bill:

An Act making dying declarations competent in prosecutions for criminal abortions and attempted abortions where the subject shall die in consequence of such unlawful acts.

Section 1.—Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by authority of the same, That the antemortem statements of any woman who shall hereafter die in consequence of any criminal acts producing or intending to produce a miscarriage of such woman as to the causes of her injuries, shall be competent evidence on the trial of any person charged with the commission of such injuries, with like effect and under like limitations as apply to dying declarations in prosecutions for felonious homicide. Provided, however, That before such statement shall be submitted to the jury as evidence, the Commonwealth shall, by competent and satisfactory evidence, prove that such woman was of sound mind at the time such antemortem statements were made. And, provided further, That no conviction shall be had upon the uncorroborated declaration of such woman.

Section 2.—That all acts or parts of acts inconsistent herewith be and the same are hereby repealed.

APPOINTEES TO THE STATE BOARD OF HEALTH.

On January 31 last two vacancies occurred on the State Board of Health, the members whose tenure of office expired being Doctor Victor C. Vaughan, of Ann Arbor, and Delos Fall, of Albion. Appointments to fill these vacancies were deferred awaiting, presumably, disposition of measures before the legislature which contemplated reorganization of the board. Neither of the bills having passed, Governor Rich, just prior to adjournment of the legislature, filled the vacancies existing in the board by re-appointing Delos Fall, and appointing Judge A. V. McAlvay, of Manistee, to succeed Doctor Vaughan.

A PROFESSOR "TACKLED" BY STUDENTS.

Doctor William A. Campbell, of the University of Michigan, was recently made the recipient of an elaborate fishing tackle from the sophomore medical class. It is gratifying to know that the efforts of the doctor to teach anatomy practically and interestingly have been appreciated by the students, and their acknowledgment could not be more fittingly expressed than by presenting this desirable and seasonable token. Doctor Campbell is to be congratulated upon having "drawn the line" for practical teaching. The gift is valued at about fifty dollars.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

THE twenty-first annual meeting of the Mississippi Valley Medical Association will occur in Detroit, Michigan, September 3, 4, 5 and 6, 1895. This association is now in a more prosperous condition than ever before. The membership list shows a large increase annually, and the character of the scientific work accomplished at each meeting is of the very highest. The officers and committee of arrangements are working unceasingly for the success of the Detroit meeting, and, although early, indications are that a meeting of unusual size and interest will be held at September. The profession of Detroit are united in their efforts to have the gathering in their city outshine all previous ones. The social features of the meeting will leave nothing to be desired in that direction. A meeting of the officers, committee of arrangements and auxiliary executive committee was held in Saint Louis in April. The prominent railroads were all represented at this meeting, and the railroad officials present promised a united effort to obtain a half fare rate to Detroit: Doctor William Pepper, of Philadelphia, has been secured to deliver the address in medicine. September was chosen as the time of the meeting for two reasons. First, because the medical colleges will not have opened, and opportunity will thus be given those connected with these institutions to be present; second, because this is the most delightful time of the year in which to visit the beautiful city of Detroit.

MINOR INTELLIGENCE.

A NEW microörganism has been discovered in pork.

THERE are 130 women oculists in the United States.

A BILL to regulate midwives has passed the Illinois legislature.

GROSS MEDICAL COLLEGE, of Denver, is to have a new building.

MEDICAL students annually spend about $750,000 in Edinburgh.

A BILL for the prevention of blindness has passed the legislature of Illinois.

THE Episcopal Church has founded a new order designated medical monks.

AN International Congress of Surgeons, to convene every five years, is proposed.

THE Cleveland Medical Library Association has 2,500 volumes in its archives.

TUBERCULOSIS, cancer, and rheumatism are the three most common diseases in California.

THE American Academy of Railway Surgeons will meet in Chicago on September 25, 26 and 27.

THE Austin Flint Medical Society, of North Central Iowa, will convene at Mason City, on July 9.

DOCTOR W. P. Munn, of Denver, Colorado, has been appointed Health Commissioner of that city.

A LAW regulating the practice of dentistry has been enacted in Nebraska. The State Board of Health is the arbiter of the applicant's fitness for practice.

THE American Medical Association had its membership augmented 350 at the Baltimore meeting.

THE American Public Health Association will hold its annual meeting at Denver, on October 1–4.

THE Hanoi Hospital, containing three hundred beds, has been officially inaugurated at Tonquin.

FOOD, the wide-awake New York health journal, recently changed its name to that of *Practical Medicine.*

THE small-pox epidemic at Hot Springs, Arkansas, has subsided. There were 194 cases with 34 deaths.

DOCTOR J. B. MURPHY, of Chicago, has been elected president of the National Association of Railway Surgeons.

THE Board of Regents of the University of Colorado have voted to discontinue giving gratuitous medical instruction.

DOCTOR RICHARD DUNGLISON has been reëlected to the presidency of the Musical Fund Society of Philadelphia.

THE Medical Department of the University of Nashville has severed its connection with the Vanderbilt University.

THE care of the insane of New York City will not be transferred to the state. The bill was not approved by the mayor.

THE American Microscopical Society will meet at Cornell University, in Ithaca, New York, on August 21, 22 and 23.

DOCTOR G. W. SAMPSON, of Tiffin, Ohio, recently died, aged ninety-two years. He had practiced medicine three score years.

THE Ohio State Board of Medical Examiners declines to recognize diplomas of the Keokuk College of Physicians and Surgeons.

THE British Medical Association will meet in London on July 30. A number of American physicians will attend the meeting.

THE bill providing for the establishment of a Board of Examiners in chiropedy has been signed by the Governor of New York.

THE Buffalo General Hospital recently received the munificent gift of $55,000. A new building will be erected with the money.

IN Nottingham, England, the fee for a professional visit is one shilling, the physician often being required to accept payment in trade.

THE trustees of the Detroit College of Medicine contemplate erecting a new building for the exclusive use of the veterinary department.

M. PASTEUR recently declined a decoration from the German government in recognition of his labors in behalf of science and humanity.

DOCTOR M. B. WARD has resigned the presidency of the Kansas State Board of Health, citing as his reason a desire to retire from public life.

THE Louisville city authorities have assigned one-fifth of the patients of the City Hospital to the Southwestern Homeopathic College of that city.

The University of Cincinnati has cancelled its affiliation with the Cincinnati College of Medicine and Surgery and will establish a medical department of its own.

The students in the preparatory medical course of Brown University were permitted to witness operations at the Rhode Island Hospital during the past year.

The Saint Louis Medical College has been sold to Doctors Briggs, Furney, and Morris. The school will be rejuvenated by the organization of a new faculty.

The Governor of New Mexico has approved the bill providing for the regulation of the practice of medicine and the establishment of a Territorial Board of Health.

M. Groussier, of Paris, has created a sensation by announcing the alleged discovery of an infallible law whereby the paternity of illegitimate children may be ascertained.

Doctor John P. Wall, of Tampa, Florida, recently dropped dead while reading a paper on "Public Hygiene" before the meeting of the Florida State Medical Society.

It is proposed, in the north of England, to build some traveling hospitals for infectious diseases, the sparsely settled condition of that region admitting of their portability.

The Sioux City Medical College requires its candidates for graduation to pass an examination before a committee from the regular profession of Iowa, Nebraska and Dakota.

The Duchess of Teck will open the New London Homeopathic Hospital in Great Ormond street, Bloomsbury, England, on July 9. It contains one hundred beds and cost £45,000.

Watertown, New York, has been visited by an epidemic of typhoid fever. The water-supply is pumped from a river at a point just below where two cemeteries drain into it.

Doctor G. D. Frost, professor of anatomy in Dartmouth Medical College, will soon be married to Miss Thurston, a graduate of Wellesley, and head nurse in Mary Hitchcock Hospital.

At the recent meeting of the Michigan State Medical Society, Doctors Boise, Connor, Patterson and the Secretary were appointed a committee to formulate plans for increasing the membership.

Doctor William N. Wishart, of Indianapolis, president of the Mississippi Valley Medical Association, read a paper before the Michigan State Medical Society on "Methods of Relief in Prostatic Obstruction." The doctor was elected to honorary membership in the society.

The Laura Memorial Medical College will be the name of a school for women to be established in Cincinnati and conducted in connection with the Presbyterian Hospital. The benefactor is Mr. Alexander McDonald, and his graciousness is in commemoration of an only child, Mrs. Laura McDonald Stallo.

Doctor Carlos C. Booth, of Youngstown, Ohio, has introduced a new and complete portable sterilizer. It is 12½ inches long, 5¾ inches high, and 5½ inches wide, and can be carried as a hand-bag.

The Mitchell District Medical Society will hold its forty-seventh semi-annual meeting at West Baden, Indiana, on July 5 and 6, under the presidency of Doctor Joseph Eastman, of Indianapolis.

The Governor of Washington has filled the vacancies on the State Board of Health by appointing Doctor C. A. Smith, of Seattle; Doctor Henry W. Dewey, of Tacoma; and Doctor E. P. Penfield, of Spokane.

The inter-state quarantine regulations declare the quarantinable diseases to be cholera, yellow fever, small-pox, typhus fever, leprosy, and the plague. This document was recently issued by the Treasury Department.

Doctor G. H. Donaldson, of Saint Louis, Missouri, has received $2,000 from a street car company in that city by way of compromise in a suit brought for damages because of injuries sustained by being thrown from a cable car.

On the 25th of April, in the Hospital Rudolfinerhaus, there was unveiled a statute of the illustrious Billroth. Doctor Gersuny, director of the hospital, and Count Wilozek delivered addresses eulogizing the eminent operator.

The College of Physicians and Surgeons of Kansas City will become the medical department of the Methodist Protestant University soon to be established in that city. This medical school has recently completed the finest chemical laboratory in the west.

Doctor M. E. Whalen, of Paw Paw, Michigan, died at his home on the 26th ultimo, in the thirty-fifth year of his age. The doctor was a graduate of the medical department of the University of Michigan, class of 1887. He had been practicing in Paw Paw nearly eight years.

After pleading and laboring twenty years with the legislature of Rhode Island the profession have succeeded in effecting the passage of a bill which provides for the regulation of medical practice in that state. The law is not an ideal one but is the best that could be obtained.

The Alabama Medical Association elected the following officers at its recent meeting in Mobile: President, Doctor William Henry Johnston, of Birmingham; secretary, Doctor J. R. Jordan, of Montgomery. The next meeting will convene in Montgomery on the third Tuesday of April, 1896.

Doctor J. D. Robinson, of Wooster, Ohio, died on the 10th, ultimo, aged seventy-five years. The doctor is credited with having performed the first amputation in our civil war. James E. Hanger, a confederate soldier, is said to be the person upon whom the surgeon exercised his operative skill.

California has two thousand duly licensed regular physicians. The State Medical Society has a membership of four hundred, but at its recent annual meeting only twenty-five were present at the first forenoon session. The average attendance during the succeeding sessions was thirty-five, except while officers were being elected, when the number was considerably augmented. The society has been in existence twenty-five years.

Th[illegible] Edouard Albert Coll[illegible] University of Vienna, own[illegible] House of Lords. There [illegible]

T[illegible] Association of Railway Surgeons per[illegible] elected: President, Doctor J. yea[illegible] Welch, of Grand Rapids, an[illegible] Kansas City, Missouri.

fa[illegible] Lying-in Hospital of the Harvard [illegible] and fourth classes attended 1,485 [illegible] The students in the medical department [illegible] access to five confinements during [illegible]

[illegible] of Pennsylvania, Charles C. Harrison, was [illegible] In accepting the position he announced his [illegible] to the institution, this amount to constitute a [illegible] income accruing therefrom to be devoted to edu-[illegible]

[illegible] Yonkers, New York, was recently sentenced to six [illegible] and required to pay a fine of fifty dollars for practicing [illegible] medical has been warring on legitimate medicine for [illegible] fined $100 in 1887, and served a term in Sing Sing in [illegible]

[illegible] Loomis memorial will consist of a central building around [illegible] a number of cottages. These buildings will be erected on [illegible] hundred and ninety acres located in Liberty, Sullivan county, New [illegible] 2200 feet above the sea, and will constitute a sanitarium for [illegible] patients.

[illegible] Willis P. King, author of "Stories of a Country Doctor," while [illegible] in Chicago attending the meeting of the National Association of Railway Surgeons, had a diamond pin valued at $950 stolen from his shirt bosom. The deed was performed in a crowded street car. The precious stone was recovered by the police.

During the past year at Harper Hospital, Detroit, free medical attendance was given to 2,179 cases in the out-patient department, 147 persons were vaccinated, and 662 surgical operations were performed. In the contagious disease department there were 51 cases of scarlet fever, with no deaths, and 73 cases of diphtheria, with only four deaths.

The Seattle General Hospital is now open for the reception of patients, and the following staff will render service in the various specialties: Eye, Ear, Nose and Throat, Doctor A. B. Kibbe; Neurology, Doctor C. W. Sharples; Gynecology, Doctors L. R. Dawson and Belle H. Smith; Children, Doctor G. B. McCul[illegible]; Surgeons, Doctors J. B. Eagleson and Alfred Raymond; Physicians, Doctors C. A. Smith and G. Newlands; Homeopaths, Doctor F. A. Churchill and Sarah [illegible]

The Texas State Medical Society elected the following officers at its recent meeting at Dallas: President, Doctor P. C. Coleman, of Colorado; vice-presidents, Doctors Wagley, Kennedy, and Bass; secretary, Doctor H. A. West, of Galveston. Fort Worth will be honored by the next meeting, which will occur on the fourth Tuesday of April, 1896.

The report of the treasurer of the Michigan State Medical Society showed that the receipts for last year, including the balance on hand of $333.55, were $1,828.55. The disbursements were $1,483.75, leaving $344.80 in the treasury, with no indebtedness. The number of delinquent members is 146, of which 51 owe for one year, 56 for two years, and 39 for three years.

Doctor Morris Henry, of New York, died on the 19th ultimo, in the sixtieth year of his age. He was a surgeon and dermatologist of considerable repute, and originated and edited *The American Journal of Dermatology*. The doctor was a native of London, England; studied in that city and at Brussels, and graduated in medicine at the University of Vermont. He was assistant surgeon in our navy during the civil conflict.

The Saint Gabriel's Retreat will be the name of a mountain resort for consumptives soon to be established in the Adirondack region by the Sisters of Mercy of Ogdensburg, New York. It will be located on a plot of one hundred acres in close proximity to pine forests covering thousands of acres, and will consist of a large central hospital supplemented by a number of cottages. A large sun-bath portico will be a feature of the sanitarium.

The Medical Society of the state of Pennsylvania held its forty-fifth annual meeting at Chambersburg, on Tuesday, May 21, and continued in session four days, Doctor John B. Roberts presiding. The reading of papers was restricted to ten minutes, and the scientific work was of a high order. The next meeting will convene in Harrisburg. Doctors W. S. Foster, of Pittsburgh, and John Montgomery, of Chambersburg, were chosen president and vice-president respectively.

Governor Rich has appointed Doctor Samuel Bell, of Detroit, to the superintendency of the Newberry asylum in the Upper Peninsula. The doctor is a graduate of the Detroit College of Medicine, and holds the professorship of Diseases of the Thorax in the Michigan College of Medicine and Surgery. A service on the State Board of Corrections and Charities has afforded the doctor an excellent opportunity for observing much regarding the management of charitable institutions that will be of incalculable benefit to him in performing the duties of this onerous position.

The first physician to locate west of the Mississippi, Doctor Frederick Andros, recently died at Minneapolis, aged ninty-two years. The doctor was the son of a New England clergyman and hero of the Revolutionary war. After marrying Eliza Bunker, a descendant of the owner of Bunker Hill, he graduated in medicine in Massachusetts and removed to Paris, Canada. Having been interested in the revolutionary conspiracy he fled from that country to Detroit, whither he walked, and assisted in quelling an epidemic of cholera in that city in 1834. In 1838 he crossed the Father of Waters and entered upon the practice of medicine at Dubuque. Doctor Andros was born in Berkeley, Massachusetts.

THE Barnes Medical College of Saint Louis, is to have a new building. A piece of ground 117x134 feet at Garrison avenue and Chestnut street has been purchased for $16,000, and on this site a building to cost $85,000 will be erected. It will be constructed of stone and brick, will have five stories and a basement, and rise eighty feet above the sidewalk, terminating in a heavy modillion cornice, with richly ornamented frieze, and surmounted with a battlement balustrade.

THE National Association of Military Surgeons held a meeting at Buffalo on May 21, Brigadier-General George M. Sternberg, of the United States army, presiding. It was the most successful meeting in the history of the organization. The election of officers resulted as follows: President, Doctor L. W. Reed; vice-presidents, Doctors A. L. Gihon and C. H. Alden; secretary, Doctor E. Chancellor; treasurer, Doctor L. C. Carr. Philadelphia was selected as the next place of meeting.

THE Missouri State Medical Association convened in thirty-eighth annual meeting at Hannibal on May 21, 22 and 23. Scientifically, numerically and socially the occasion was a pronounced success. Officers for the ensuing year were elected as follows: President, Doctor Leslie C. Hall, of Kansas City; vice-presidents, Doctors J. H. Thompson, H. C. Schutte, and J. J. Russell; recording secretaries, Doctors Frank R. Fry and F. B. Hall; corresponding secretary, Doctor C. F. Wainwright; treasurer, Doctor C. A. Thompson. The next meeting will be held at Sedalia.

THE prevalence of scarlet fever at Seattle, Washington, recently caused the Board of Health to order the closing of the schools. The principal refused to obey the mandate, and requested the pupils to enter, despite the presence of the health officers. The children took possession of the school, gaining entrance at the doors and windows, and maintaining their position by hurling missiles at the officers and subjecting them to a stream of water from the hose with which the school is provided. Order was not restored until noon, when the principal was arrested and the building evacuated.

YOU have to go away from home to get the news. *The Atlantic Medical Weekly*, of Providence, Rhode Island, recently contained this item: "A law to regulate the practice of medicine in the state of Michigan and to create a board of registration has recently been enacted. The law goes into operation July 1, and is not retro-active, all physicians in practice in the state July 1, and all having diplomas from reputable colleges, being entitled to register. The board is to be composed of four regular physicians, two homeopaths, two eclectics, and two physio-medicals." Brother, this is too good to be true!

A NEW introducor and extractor for intubating the larynx has been devised by Doctor D. C. Lewinthal, of New York. The introducor consists of a metallic ring, which closely fits the end of the index finger. Beneath this ring an obturator is attached by means of a spring catch. The head of the tube has a wire rim. The tube is kept attached to the obturator by a string drawn through the wire rim and passed to the right of the index finger, where it is held against the palm of the hand by the third and fourth fingers. By releasing the string after accomplishing intubation the obturator need only be lifted out of the tube and the operation is completed.

THE Association of State Medical Examining Boards was established at Baltimore on May 9. The organization contemplates a uniform schedule of requirements for all medical colleges and examining boards, and the perfecting of a method for higher medical education. The following officers were elected for the ensuing year: President, Doctor W. W. Potter, of Buffalo, New York; vice-president, Doctor J. M. Hays, of Greensboro, North Carolina; secretary, Doctor B. M. Griffith, of Springfield, Illinois. A constitution and by-laws will be drafted by a committee consisting of Doctor Charles McIntyre, of Easton, Pennsylvania; Doctor W. W. Potter, of Buffalo, New York; and Doctor N. Payne, of Albany, New York.

THE Governor of New York has signed the bill providing for the amendment of the public health law relating to veterinary practice, and hereafter no person will be permitted to practice veterinary medicine in that state unless licensed by the Regents of the University of the State of New York. The Regents are empowered to create a Board of Veterinary Medical Examiners from a list of surgeons nominated by the State Veterinary Medical Society. The board will consist of five members, and the society will annually nominate twice the number to be appointed, from which the Regents are to make the appointments. Examiners may be removed for misconduct, incapacity, or neglect of duty, the power to revoke a license being vested in the Regents.

DOCTOR SAMUEL P. VONDER SMITH died of consumption at his home in Bloomfield, New Jersey, on May 31, aged seventy-four years. The doctor graduated from the Philadelphia College of Medicine and Surgery in 1849. Prior to the civil war he was for a number of years examining surgeon of the New York Police Department, and later he served as examining physician of the Mutual Life Insurance Company of New York. During the war Doctor Smith enlisted in the Sixth New York Cavalry as surgeon, and afterward ministered in like capacity to the Sixteenth New York Cavalry. He achieved considerable fame by reason of being one of the number who captured J. Wilkes Booth, the assassinator of President Lincoln. Since the close of the war he has had charge of the Indian Department of Arizona for some years, but latterly he has been engaged in private practice.

THE Connecticut Medical Society held its one hundred and third annual meeting in Hartford, on May 22 and 23, under the presidency of Doctor F. N. Braman. The secretary's report showed a membership of 591. It was reported that antitoxin had been employed in seventy-one cases with a result of sixty-two recoveries; the cold bath was recommended in typhoid fever; the creation of a national department of hygiene with cabinet representation was urged in a paper on "Medical Sociology;" and the following officers were elected for the ensuing year: President, Doctor Seth Hill; vice-president, Doctor Rienzi Robinson; assistant secretary, Doctor Julian La Pierre; treasurer, Doctor W. W. Knight; committee on matters of professional interest, Doctor C. S. Rudman, Doctor A. E. Abrams, Doctor R. W. Kimball; committee on publication, Doctor W. H. Donaldson; committee on anniversary, Doctor C. P. Lindsley, Doctor M. C. O'Connor, Doctor F. H. Wheeler; dissertator, Doctor S. B. Childs; alternate, Doctor A. N. Alling; member of committee on medical examinations, Doctor J. F. Calef.

THE forty-fifth annual meeting of the Illinois State Medical Society was held at Springfield on May 21, 22, and 23. The scientific features of the occasion embraced a goodly number of papers and discussions. A banquet was served at the Leland Hotel and among others who responded to toasts were Governor Altgeld, Lieutenant-Governor Gill, and Speaker Meyer. The next meeting will be held at Ottawa in 1896, and the following officers will have *charge d'affaires* in the meantime: President, Doctor O. D. W. Graham, of Chicago; secretary, Doctor John B. Hamilton, of Chicago; treasurer, Doctor George N. Kreider, of Springfield.

THE Tri-State Dental Association—Michigan, Ohio, and Indiana—recently concluded a very successful meeting in Detroit by electing the following officers for the three sections: Indiana—President, W. W. Schyrock, of Fort Wayne; vice-president, W. S. Rawis, of Indianapolis; secretary, M. A. Mason, of Fort Wayne; treasurer, R. T. Oliver, of Indianapolis. Ohio—President, W. H. Todd, of Columbus; first vice-president, Henry Barnes, of Cleveland; second vice-president, L. E. Custer, of Dayton; secretary, L. P. Bethel, of Kent; assistant secretary, G. Molyeneaux, of Cincinnati; treasurer, C. J. Keely, of Hamilton. Michigan—President, J. Ward House, of Grand Rapids; first vice-president, A. W. Diack, of Detroit; second vice-president, E. T. Loeffler, of Saginaw; secretary, B. H. Lee, of Grand Rapids; treasurer, G. H. Mosher, of Jackson; member of board of censors, C. B. Blackmar, of Jackson. A clinic was an interesting feature of the meeting. After disposing of the patients the dentists provoked considerable laughter by experimenting upon themselves with nitrous oxide.

CONTEMPORARY OPINION.

AN INTERNATIONAL LANGUAGE.

[THE MARYLAND MEDICAL JOURNAL.]

THE importance of some universal language, so that the scientific world may communicate on a common basis, is growing greater each year. International medical congresses hold meetings much more frequently than formerly and as long as several languages are employed the usefulness of such gatherings will be very much impaired.

Already it has been announced that at the Ninth International Congress of Hygiene and Demography, which is to be held at Madrid in 1897, the Spanish government has sanctioned the use of no fewer than six official languages, namely, Spanish, Portuguese, French, Italian, English and German, and *The British Medical Journal* very justly remarks that at this rate the international congresses bid fair to be excellent object lessons in the "confusion of tongues."

Modern Greek has had many and strong champions, as the type of a perfect language, rich, euphonious, flexible and precise, but it is far too limited and too difficult to learn. A more recent writer urges French as the language of international scientific bodies.

The difficulty of languages like French and Italian and even Spanish and Portuguese, is that in rapid speaking there is a certain amount of elision which makes them difficult to be understood by all except the most experienced.

A language easily understood is German, which is almost invariably pronounced as spelled, very few elisions and contractions taking place. The search after an international language is rather Utopian and yet it seems quite a hardship to make those desirous of extending their knowledge in world congresses to learn several tongues. So many persons, clever in almost every other respect, have no talent for languages, and years of intercourse in a language foreign to them fail to make any impression, and they can speak and understand only their mother tongue.

The French are much averse to learning any foreign language and as their own is universally conceded to be the polite and courteous language of the world it has a certain preëminence which even English does not possess. This subject is one which no body of persons or nation can decide, but which will work itself out as necessity demands.

The use of English is increasing from year to year, but it has difficulties which are almost insurmountable to some nations. The disadvantages of the use of a large number of languages at a congress are that the congresses grow too unwieldy, so that a restriction of the number of languages would probably restrict the size of meetings and possibly facilitate work.

Whatever comes of this question will come gradually and meanwhile the younger generation of physicians should make themselves as far as possible familiar with French and German and perhaps Italian.

A NATIONAL DEPARTMENT OF HEALTH.

[THE PHILADELPHIA POLYCLINIC.]

From time to time in various medical and sanitarian societies, congresses of physicians and sanitarians, and medical journals, agitation has been undertaken in behalf of the creation of a National Department of Health. The President of the United States, in a message to Congress, recommended the creation of such a department, and it is to be presumed that, in one or another form, the department will be created.

The plans suggested for the organization of the department by various medical societies, committees, newspapers and individuals vary considerably, not only in detail, but in fundamental principle. It is not our purpose to discuss these various plans *in extenso*, but merely to call the attention of our readers to the importance of considering the subject, and of adding their influence to the movement in favor of the centralization of sanitary authority by an acceptable method.

Some of the plans suggested, however, and the character of some of the individuals at work in their behalf are such as to arouse grave doubts of their wisdom in the minds of those who may justly be called the better element of the profession. Whenever and wherever partisan politics or personal self-seeking has been permitted to influence the organization and administration of Health Boards or other sanitary bodies, the result has been detrimental, alike to the interests of science and to the welfare of the community.

The medical politician is one of the worst of his class; clothed in the gown of a learned profession, his true character is the more readily concealed and his opportunities for evil are thereby multiplied. That such men exist is a sad but indisputable fact, and it is well known that they are actively at work in the hope that some of the loaves and fishes to be distributed by the new department, or some of its opportunities for personal aggrandizement of a less material character, will fall to their lot.

It, therefore, becomes the duty of those interested in the health of the community, and in the purity of government, not less than in the elevation of the medical profession, to be on their guard and to see to it that while they assist all proper efforts to concentrate and improve the administration of health affairs in the United States, the fruit of their toil shall not be plucked by self-seeking politicians with a medical degree.

MEDICAL MEN AND MEDICAL SOCIETIES.

[THE CINCINNATI LANCET-CLINIC.]

WITHIN the memory of most men, medical societies were not popular resorts for the profession. If a physician, by discovery, found a new drug, or new method of practice, or described some experience with unusual skill, a considerable number of listeners were dissatisfied. A fear of something new, or some innovation which would disturb the present serenity of events, existed, especially among the older members. The old optimist, whose contented serenity filled all his surroundings with cheer, suddenly changed to a gloomy pessimist when confronted with new methods of treatment. Science had certain fixed lines to him, which he never crossed, or never felt certain of any one who was on the other side. The annual meetings of the older societies were conservative, substantial and solid in work, never disturbing, except when some young man boldly stepped out the lines. He soon found this unsafe, and finally settled down with the solid majority. A decade has passed, and with it all the old conservatism, and to-day medical societies are arenas for conflict and startling effects—for scientific gymnastics.

The physician who is so busy that he cannot read medical journals or books, but must take everything second-hand, appears at the society, and absorbs all the marvelous, and the new and strange, and then poses as the author of these new statements. As he grows old only his credulity increases, and proprietary medicines, secret preparations, and specific remedies are being constantly tested in his hands. A shrewd medical advertiser said he could put up oatmeal as a remedy for rheumatism, and after the distribution of a few thousand samples have many certificates of cure from this credulous substratum of physicians. This is the natural reaction of the old conservatism, where the forefathers shrank and repelled anything new. Now the children welcome and credulously adopt every innovation that appears.

Societies, like men, manifest the same spirit, and have the same experience. Seen a little higher up this is a most cheering sign of progress in the course of years. The opposition, denials and doubts of one age are followed by the credulity and acceptance of every statement in the next. Then follows the grand period of reason, of sifting out the facts, of finding the solid foundations of every advance. Medical men and medical societies are rapidly passing through these varied stages. The air is full of change, and the physician who fails to read journals and books, and has no time to join the societies, should retire from active life. If he does not he will soon be far in the rear, hopelessly crowded out.

Medical men who look beyond the confused struggles of to-day can clearly note the direction of this movement, and mark a rapid evolution outwards into the coming century, when science will teach new lessons of living. The practice of medicine will then be the most exalted ministry of humanity, and the prevention of disease the most triumphant road of practice.

In the meantime the enthusiast and dreamer, whose theories startle every one, should have a free field and no opposition. The laws of survival will quickly throw out the bad, and perpetuate the truths, and the false will disappear. The eternal struggle to put things aright by resolution or vote has a farcical side, and in most cases perpetuates the very evils they seek to remove. The optimists of all have a solid foothold in this scientific struggle.

RECENT PUBLICATIONS.

REVIEWS.

THE TREATMENT OF WOUNDS, ULCERS AND ABSCESSES.*

DOCTOR WATSON CHEYNE's little manual on the treatment of wounds is a classic of its kind. Simple and truthful, it imparts just such information as the surgeon needs, and indicates with exactness the scientific principles underlying the modern treatment of wounds.

*By W. Watson Cheyne, M. B., F. R. S., F. R. C. S., Professor of Surgery in King's College, London. In one 12mo volume of 207 pages. Cloth, $1.25. Philadelphia: Lea Brothers & Company, 1895.

INDEX OF MEDICINE.*

DOCTOR TAYLOR's Index of Medicine is a work which merits wide popularity. It is an index by title only, as under each reference is found a lucid and concise exposition of the subject under review. The work will be found especially useful for students preparing for examining boards, or for practitioners who may desire a brief and cursory review of some subject.

*By Seymour Taylor, M. D., Member of the Royal College of Physicians; Senior Assistant Physician to the West London Hospital. In one large 12mo volume of 801 pages, with 35 engravings. Cloth, $3.75. Philadelphia: Lea Brothers & Company.

THE YEAR-BOOK OF TREATMENT FOR 1895.*

THE eleventh consecutive issue of this annual summary of medical progress again appeals to the busy practitioner, who will find therein ready for immediate use a digested and concentrated mass of medical literature such as no one man could handle. The value of the new volume is enhanced by a selected list of new books, new editions and translations, which will be an aid to those desiring to acquire a knowledge of the literature of any given subject.

*A Comprehensive and Critical Review for Practitioners of Medicine and Surgery. In one 12mo volume of 501 pages. Cloth, $1.50. Philadelphia: Lea Brothers and Company, 1895.

A SYSTEM OF SURGERY.*

A SYSTEM OF SURGERY by American authors will naturally excite eager and interested attention from the physician. The work before us promises to fulfill every expectation which may have been formed concerning it. The great surgical writers and exponents of both the science and art have been put into requisition, and contribute papers of high literary and scientific value. Among the noteworthy articles in the present volume may be mentioned the concise yet excellent résumé in the history and literature of surgery. Doctor Councilman expatiates upon Surgical Pathology in a very interesting way. Doctor Welch's article on Bacteriology is of course thoroughly up to date. Doctor Nancrede, of Ann Arbor, contributes an interesting article on Inflammation, Ulcer and Gangrene. The article on Gunshot Wounds by Doctor Phineas Connor, is more than worth reading. The editor's paper on Fractures and Dislocations is a model of a concise and well phrased monograph. Doctor Woods contributes a highly interesting paper on Anesthesia. He expresses his preference for ether in a forcible way: "I personally believe that the large statistics, overwhelming as they are, the number of cases reported, represent as near as can be the true state of the case, and that the surgeon who administers chloroform faces the fact that the dangers of its use are more than four times those which confront the man who administers ether." Gerster's and Smith's articles on Asepsis and its Technique, and on Operative Measures, are excellent.

A careful review of the "System of Surgery" will convince all that in this work the American profession will have a surgical hand-book that will at once be authoritative, modern and trustworthy.

*By American Authors. Edited by Frederic S. Dennis, M. D., Professor of the Principles and Practice of Surgery, Bellevue Hospital Medical College, New York; President of the American Surgical Association, et cetera, assisted by John S. Billings, M. D., LL. D., D. C. L., Deputy Surgeon-General of the United States of America. To be completed in four imperial octavo volumes, containing about 900 pages, each with index. Profusely illustrated with figures in colors and in black. Volume I, 870 pages, 422 engravings and 2 colored plates. Price per volume: $6.00 in cloth; $7.00 in leather; $8.50 in half Morocco, gilt back and top. Full circular free to any address on application to the publishers.

REFERENCES.

PERIODICAL LITERATURE.

THE NEW SCIENCE REVIEW.

The last issue of this new magazine contains reading matter of special interest. George Fraser Fitzgerald, of Trinity College, Dublin, has an able article on "Ether and Its Functions;" Cheiro has some original thoughts on "Hands—as Indicative of Character;" William George Jordan writes on "Genius—the Model for Educational Methods;" Mrs. Mary Parmele discusses the question whether "Physical and Spiritual Energy are Identical;" Professor Angelo Heilprin notes "The Progress of Science," and Evelyn J. Hardy discloses her ideas of "Scientific Irritability."

THE ATLANTIC MONTHLY.

The June number contains an interesting descriptive sketch of "A Pilgrimage to the Great Buddhist Sanctuary of North China," by William Woodville Rockhill; Elizabeth Stuart Phelps has four chapters of her story entitled "A Singular Life;" and Bradford Torrey writes on "A Week on Walden's Ridge." Of especial interest is the article "Through the Windows—Two Glimpses of a Man's Life," by Francis Edmund Lester. Mary Stockton Hunter has a poem on "A Japanese Sword-Song;" and "On the Oregon Express" is the title of another by Virna Woods. "Vocal Culture in its Relation to Literary Culture," by Hiram Corson, will prove of interest to most readers.

SCRIBNERS'S MAGAZINE.

THE June issue of this magazine has for its leading article "Chicago—Before the Fire, After the Fire, and To-day," by Melville E. Stone. It is very finely illustrated and is a vivid description of the progress and greatness of this wonderful city. "The Bicycle, the Wheel of To-day," by Philip G. Hubert, Jr., is a timely discussion on an important topic. Bicycling is treated not only from a social, but from a physical stand-point. "A History of the Last Quarter-Century" carries the reader back to Hayes' administration. "The Art of Living," by Robert Grant, discusses the use of time, and with its amusing sketches is a very interesting as well as instructive article. "The Gentleman From Huron," "A Coöperative Courtship;" and "The Amazing Marriage" are other articles in this number.

MEDICAL PROGRESS.

MEDICINE.

THE LYMPHOCYTOTIC ACTION OF PILOCARPIN.

IT will be recalled that a short time ago quite a ferment was created by the announcement through the public prints that a New York physician had discovered in pilocarpin a remedy for tuberculosis. That this announcement was unwarranted, as well as unjust, the sequence of events amply demonstrates. The fact of the matter is that Doctor Louis Waldstein, of New York, and working in Berlin, found in a number of infectious diseases certain changes in the blood that seemed to him indicative of a tendency to, if not a part of the process of, recovery, and similar changes he found could be induced by the subcutaneous administration of pilocarpin in small and medicinal doses. The report of these observations, and the conclusions to which they lead, are detailed in *The Berlin klinische Wochenschrift*, 1895, Numbers XVII and XVIII.

Waldstein made a study of the colorless blood-corpuscles in cases of diphtheria treated with antitoxin, from the height of the attack until convalescence was established. He found that prior to the injection of the antitoxin, and during the acme of the disease, the multinuclear leukocytes were increased in number, while the lymphocytes were diminished. At this stage the nuclei, particularly of the uninuclear cells, stained feebly with methyl-green, and the granulations, which were small and few, were stained bright red by acid fuchsin. As soon, however, as improvement began to set in the relation suddenly changed, the number of multinuclear cells declining to the normal and the uninuclear increasing. Now both nuclei and granulations stained more deeply, and the latter increased in number and size. When the lymphocytes exceeded the normal they contained the finest granulations, and there were present also cells containing eosinophile granulations. As recovery was approached the number of coarsely granular cells gradually diminished. In cases unattended with improvement the injection of the antitoxin was followed by an increase of lymphocytes, without, however, a reduction in the multinuclear cells. This persistence in the increase of the number of multinuclear cells proved of unfavorable prognostic omen, the patients dying or the disease assuming a chronic character, with involvement of the lymphatic glands or of the ears. The mutual relation of the leukocytes bore no constant relation to the course of the fever or the character of the pulse; nor did the visible membrane appear to stand in any causal connection therewith. Post-mortem examination of children dead of diphtheria disclosed swelling of Peyer's patches and enlargement of the mesenteric glands, and not rarely acute disseminated miliary tuberculosis.

Assuming that artificial increase in the number of lymphocytes played an important part in recovery from infectious diseases, an agent was sought for capable of effecting such a change, and pilocarpin was found to answer the purpose. With this drug marked reduction in the size of enlarged lymphatic glands in the sequence of measles and scarlatina was effected. Children were given injections beneath the skin of one-thirtieth grain, at intervals of one or more days for a week or ten days. Improvement also followed such treatment in a case of mediastinal and multiple lymphomata, although the patient was at the same time taking arsenic. The opinion is expressed that pilocarpin is capable of a curative action upon lymphatic glandular tumors. Examination of the blood, under such conditions, disclosed a state of hypo-leukocytosis, which disappeared with the institution of the treatment. The temperature was also slightly elevated, but declined under treatment. Complaint of pain referred to the ears likewise disappeared.

In a fatal case of advanced pulmonary and glandular tuberculosis the injection of one-sixtieth grain of pilocarpin was followed by vomiting, elevation of temperature, and a scarlatinous exanthem, and post-mortem examination disclosed recent disseminated areas of hepatization in the lungs, with miliary nodules and a cavity with smooth walls. In another fatal case the temperature rose after daily injections of one-thirtieth grain for a week, and a week afterward meningeal symptoms appeared, followed in five days by death. Post-mortem examination disclosed carnified areas, miliary nodules, a cavity with smooth walls and cicatrices in the lungs, with tuberculous meningitis, hydrocephalus and internal hydrorrhachis. In other cases also the injection was followed by elevation of temperature, blood-streaked expectoration, and pain in the side. It will be noticed that the symptoms and the anatomic conditions resembled those that followed injections of tuberculin. These changes are ascribed to a stimulating influence upon the lymphatic apparatus. In a case of lupus of long standing an injection of one-thirtieth grain of pilocarpin was followed by marked improvement. As no reaction occurred, the dose was subsequently increased to grain one-twelfth, and the improvement was maintained.

Seven cases of streptococcous angina, in patients from three to ten years of age, were treated with daily injections of from one-sixtieth grain to one-twelfth grain, with the result of increasing the number of lymphocytes and diminishing the number of multinuclear cells, causing a decline in temperature and leading to recovery. In a case of uncomplicated diphtheria no influence was exerted by pilocarpin, but in cases of mixed infection the conjoint use of pilocarpin and antitoxin was followed by results of which either alone was not capable.

These admirable observations, while interesting and suggestive, are far from conclusive, but they open a field of investigation that, it is to be hoped, may yield productive therapeutic results.—*The Medical News*, June 1, 1895.

DIPHTHERIA ANTITOXIN.

Kuntzen (*Deutsche medicinische Wochenschrift*, 1894, Number XLIX), in reporting the results of the use of Behring's antitoxin in diphtheria, emphasizes some things worthy of general attention. In the first place he criticises the custom of classifying cases as "mild," "moderately severe," and "severe," since the prognosis often varies from hour to hour. Behring and his collaborators laid special stress on the value of the serum in cases treated early; and in the report on 220 cases by Ehrlich, Kossel and Wassermann, the latter classified their cases according to the day of the disease on which treatment was begun, showing that the death-rate, which was 0 in cases treated on the first day, increased from 3 per cent. on the second to 14, 23, 43.5, et cetera. If future results are published in this way, the value of the remedy can be more definitely determined. Kuntzen himself treated twenty-five cases and lost only three. Five required tracheotomy, and of these, two died. Kuntzen followed Behring's method of treatment, giving 600 immunizing-units to children on the first or second day of the disease; to children coming under treatment later, or adults, twice that dose.

Hager (*Centralblatt für innere Medicin*, 1894, Number XLVIII), reports twenty-six cases of diphtheria treated with Behring's serum in private practice. The diagnosis was controlled by bacteriological examinations. One case proved scarlatinous and ended fatally. Of the twenty-five cases of true diphtheria one died. This was a child of eight months, almost moribund when first seen, and requiring tracheotomy before the injection was made. The child lived four days; the local condition improved, but death occurred with increasing weakness and with bronchitis. The other cases were classified as follows: Mild, 8 cases; moderately severe, 6 cases; severe, 10 cases. The dose of antitoxin varied from 250 to 2500 or more immunizing-units, on the average 1000 to each case. The usual course of the disease after the injection was so characteristic that Hager could not doubt the effect of the remedy. A day after the injection the general sensation improved; after two days the fever usually subsided; after three days the pulse was less frequent. After one day the membrane appeared sharply defined, and usually by the fourth day it had disappeared. Serious consequences were not observed. The local reaction was slight. In five cases an urticarial erythema occurred around the point of injection, in one case at a distant point. Thirty-five children in infected families received prophylactic treatment. Of these, four acquired diphtheria. One recovered after an injection of 500 units, two without treatment (the treatment of the fourth is not mentioned).

Hager calls attention to the importance of using the serum in private practice, not on account of the possibility of beginning early, but also on account of the lessened danger of severe complications (especially streptococcus infections) so common in hospitals.

Moeller (*ibidem*) reports briefly the results of the treatment of diphtheria with and without serum in the Magdeburg (Altstadt) Hospital. The serum was not used in mild cases, nor in cases brought in moribund. Owing to this and the fact that the mild cases were admitted to the hospital in unusually large numbers, the author does not feel permitted to draw conclusions. Of the cases in which tracheotomy was performed, those treated with serum had a mortality of 39.6 per cent., and those without it, 55.6 per cent. The death-rate of the former is the lowest yet reached in the institution, but it is drawn from a comparatively small number of cases (41).

The author thinks that in comparing results those of tracheotomized patients are most reliable; but considering the almost hopeless condition in which this operation is often done, the conclusion does not seem a proper one.—*The American Journal of the Medical Sciences.*

SURGERY.

EIGHTY-SEVEN CASES OF TREPHINING OF THE APOPHYSES OF THE MASTOID.

These 87 operations were upon 82 subjects, of which 80 were children. The first cases occurred in 1892, and the subsequent history of the cured patients has been secured.

Thirteen of the 82 patients have died; 5 of intercurrent disease developing some weeks after the operation (broncho-pneumonia, 3; general tuberculosis, 1; tubercular meningitis, 1). In 4 cases (acute meningitis, 3; and cerebral abscess, 1) the condition which caused death existed before the operation. Of the 72 remaining cases 3 died, and in but 1 of them was it a direct result of the operation.

In order to study these cases they are best divided into the following classes:

(1) *Acute Mastoidal Abscess with Acute Otitis Media.*—Thirty-seven cases; 36 subjects. Complete cure, 29; recurrence, 1; permanent fistula, 1 (tuberculous infant); recent operations with the patients still under treatment, 2; progressive necrosis which two operations did not suffice to check, death, 1; death from intercurrent complications (scarlatina, pertussis, and cholera infantum), 3; death from operation, 0.

In all of these trephinings, twelve of which were performed upon children less than a year old, pus was found in the mastoid cells; in none of them was the sinus opened nor was the facial nerve divided. The dura mater was accidentally exposed in one case, but no harm resulted. The operation done after the method of Schwarze is simple, rapid, and easy of control; its mortality is *nil.* For these reasons the incision of Wilde, so apt to be followed by a fistula, should be abandoned, notwithstanding some recent reports.

For the relief of the acute mastoiditis, in only six cases was it necessary to open the canal of the antrum and the tampanum.

(2) *Mastoidal Fistulas.*—These fistulas are common, since he has been obliged to operate 33 times upon 31 subjects. Their previous duration was from some weeks to four years. *The great majority were a sequel to the incision of Wilde.* Of the 33 fistulas 25 are actually cured; in 1 the result is unknown; 1

persists; 3 are still under treatment; 5 are dead, 3 independent of the operation, 1 from meningitis developing as a result of the operation (the entire petrous portion was removed), 1 from cerebral troubles occurring seven months after the operation; but 1 death, therefore, in 33 cases, and this in a very extensive diseased condition.

The operation then is safe. The apophyses, the cavity of the antrum, and the tympanum should be methodically opened and curetted free from all diseased bone. In this way the facial nerve is spared; it was cut but three times; although by the operation recommended by Chaput it is almost inevitably sacrificed. The post-operative course of treatment is very long, and lasts at least six months; the results are excellent, however, and even in cases where both sides were operated upon fair hearing was preserved.

(3) *Mastoidal Abscess following Chronic Otitis.*—These patients, 11 in number, are identical with those in the last class,—5 cures; 1 recurrence where the trephining was confined to the apophysis alone; 3 are under treatment; 2 deaths, non-operative (chronic tuberculosis, old cerebral abscess).

(4) *Chronic Suppuration of the Labyrinth.*—These suppurations should be first treated by opening the membrane (operation of Stoeke), for if the process is confined to the tympanum a cure may be effected in three weeks (1 case). But one should make it a rule to carefully examine the cavity of the antrum, and it may be necessary to open all of the cavities as in a fistula. Three cases: 1 cured; 2 under treatment.

(5) *Eburnation of the Apophysis without Suppuration of the Tympanum or of the Mastoidal Cells.*—One case: 1 cure.—Doctor A. Broca at the French Congress of Surgery, Session of 1894.—*Annals of Surgery.*

MASSAGE OF THE PROSTATE.

Under the questionable terms, "Milking the prostate," and "milking the seminal vesicles," manipulative treatment of diseases of the tissues about the vesicle neck in close proximity to the rectum has recently become somewhat of a fad. Fadism seems to be quite a prevalent complaint among andrologists. A short time since it was the deep urethra which must be tortured with deep injections, for the purpose of curing disease affecting large areas of glandular and mucous tissues by medicating a couple of inches of superficial mucous surface. Now the seminal vesicle gallantly comes to the front and allows itself to be "milked" for a consideration, or without it for that matter, as a panacea for all andropathology.

The term "milking the prostate" and seminal vesicles is neither euphonious nor accurate; it implies the view that the indication in protastic therapy is simply to empty the prostatic ducts and follicles and the vesiculae siminales of their contained secretions, when as a matter of fact this squeezing out of secretion is of but secondary importance in by far the majority of cases. To be sure, we meet with an occasional case in which the emptying of an over-distended seminal vesicle by digital pressure from the rectum gives great relief of very troublesome symptoms, but these cases are so exceptional as to count for little in the discussion of the general question. In many cases prolonged and vigorous manipulation causes but little flow of secretion, either at once from the meatus or later mixed with the urine, yet very beneficial results occur.

The term massage of the prostate and its adnexae is comprehensive, and implies the true indication in the cases in which the treatment by manipulation is appropriate.

Glandular infection must be acknowledged to be the primary and most important condition in most of the conditions of chronic inflammation in and about the prostate. Within a very short time, however, the interstitial tissue, and finally the environing cellular tissue about the prostate, seminal vesicles and vesical neck, becomes infiltrated with inflammatory exudate which is liable to organize sufficiently to cause permanent and often irreparable injury. Such exudation is to be inferred in every case of deep-seated inflammation in this region, binding together the affected structures in very much the same manner as the so-called pelvic cellulitis in women glues the tissues and organs primarily affected into one solid, indurated mass. This exudation constitutes the increase in bulk characteristic of chronic deep-seated inflammation about the male vesical neck. Serious circulatory obstruction comes on after a time and enhances the exudative process, in some cases by prostatic hyperemia, active or passive. Circulatory aberration is the primary condition but is followed by hyperplasia of the affected part. In many prostatiques this hyperplasia is the starting point and essential feature of prostatic enlargement. Relieved early, it may not be succeeded by permanent overgrowth, as it is sure to be if allowed to go on unchecked. Massage of the prostate fulfills several indications.

(1) And most important: Stimulation of lymphatic absorption and local tissue change by which the exudate is rapidly removed, in many cases with marvelous rapidity.

(2) Stimulation of circulation with especial relief of venous obstruction which is so vital a factor in such conditions as those under consideration.

(3) Relief of hyperesthesia, as a result of which, manipulation which is often at first quite painful becomes easily tolerated and finally absolutely painless with any amount of pressure that can be brought to bear with the finger.

(4) And least important: Expression of secretion from the affected glandular structures. In the exceptional case, as already remarked, this expression of secretion is a quite important factor in the result.

Clinically, massage of the prostate is indicated in:

(1) Chronic follicular prostatitis, so-called "posterior urethritis," "inflammation of the vesical neck," et cetera.

(2) Chronic prostatic hyperemia with hypersecretion. The so-called chronic follicular prostatitis of the text-books; the spermatorrhea of the quack.

(3) Prostatic hyperesthesia with frequent micturition or premature ejaculation, the latter being often due to relatively great sensitiveness of the caput gallinaginis.

(4) Prostatic hyperplasia in men about middle life, the preliminary stage of enlarged prostate in many cases.

(5) Pseudo-tuberculosis of the prostate, involving lympho-adenopathy of simple type.

It is obvious that in all acute inflammatory conditions of the prostate massage is contraindicated.

In performing massage the patient should generally be instructed to thoroughly empty the bowel shortly before treatment. If copious hot rectal lavage and hot sitz baths be made adjuvants to the treatment, progress will be much more rapid. In most patients the bowel will be found empty if regular movements be had, but a preliminary enema makes assurance doubly sure, and makes the tissues to be operated upon softer, less sensitive, and more susceptible to massage.

The patient had best lie in the Sims position one or the other index finger being used. Should any condition of the anus be present which leads to pain and spasm under digital exploration, this should be attended to at once, else prostatic massage will do more harm than good.

In massaging the prostate the direction of its ducts and those of the seminal vesicles should be remembered, the pressure and stroking being directed obliquely downward, forward and inward toward the median line. The deep urethra should, however, be massaged by up and down pressure in the median line, the direction of the rubbing being toward the bulb.

The first séance should be short and the massage gentle, else the patient is liable to lose his enthusiasm and may be directly injured by the treatment. In most cases massage is not necessary oftener than every other day; in others again, daily treatment is essential. In very sensitive cases intervals of three to ten days are necessary.

I have made no attempt at an exhaustive discussion of prostatic massage, but believe that a fair, practical presentation of the subject has been given in the foregoing short article, which will serve as a guide rather than a source of confusion to the general practitioner.—Doctor G. F. Lydston in *The Medical Recorder*.

GYNECOLOGY.

RECENT EXPERIENCE IN THE ELECTRICAL TREATMENT OF FIBROID TUMORS AND CATARRHAL AFFECTIONS OF THE UTERINE TRACT.

It has now been some eleven or twelve years since Apostoli claimed attention for his method of ameliorating and symptomatically curing fibroid tumors of the uterus by the use of electricity. After the lapse of such a time, and in view of the accumulated experience and testimony of many investigators, it is quite possible to draw conclusions of average correctness as to the true value of the method and its applicability to the different varieties of the affection.

To the conscientious physician who is thoroughly informed on this question there is no conflict whatever between the claims of electricity and surgery in the treatment of two classes of these cases. There are cases in which electricity in expert hands can give a hundred per cent. of practical cures, not necessarily cosmetic cures, but completely satisfactory in the comfort and well-being of the patient. There are also cases in which electricity can only do harm, and in which ablative surgery is not only wise, but imperative. In a third class true conflict occurs, and I may specify this class at once as made up of large tumors causing much deformity and which are either subperitoneal and thus beyond the direct range of electrical treatment, or else so inertly fibrous as to resist prolonged efforts at electrically induced absorption. Some tumors in the latter portion of this class may be arrested in further growth, it is true, but electrical treatment is apt to be so unlikely to cause material retrogression in size as to raise the question whether the patient should not undergo the dangers of an operation rather than endure the deformity. In this class pain and pressure symptoms are apt to have ceased since the emergence of the tumor from the pelvis into the abdomen, but if not, such symptoms are generally amenable to permanent relief by electricity.

Foremost among the cases that are too often operated upon, though they clearly indicate electrical treatment, are all small tumors in the initial months or years of their growth, often mistaken for painful displacements, ovarian disease, et cetera. In these cases a complete and permanent cure can be confidently anticipated. Hemorrhagic tumors of all sizes should always be placed under this treatment. I have never seen a failure in the cure of hemorrhage and pain, and the size will frequently be reduced. Of the larger tumors clearly amenable to electricity the interstitial, multinodular growths are most promising, particularly when the tumor is somewhat symmetrically developed about the uterine cavity. Of this class I have had cases of actual disappearance by absorption, notably one as large as the adult head.

The class in which electricity is not indicated embraces all cystic or degenerating tumors, quickly growing tumors in which malignancy may be suspected, and all tumors associated with purulent inflammations of the appendages.

The prevention and cure of tubo-ovarian disease by arresting catarrhal affections of the uterine tract is one of the most important services of electro-therapeutics to gynecology. By tubo-ovarian disease, I mean chronic catarrhal inflammation of the Fallopian tubes, which by contiguity of structure has involved the ovarian periphery or stroma, resultiug in infiltrated and enlarged tubes and ovaries. Clinically, the condition is manifested by almost continuous pelvic or sacral pain and by tenderness, aggravated by catching cold and at the menstrual periods. In a considerable proportion of cases the general health is more or less affected, nervous prostration and gastro-intestinal torpidity being frequently an accompaniment of the local condition. A bimanual examination will reveal an enlarged and fixed uterus, with boggy masses in one or both ovarian regions, and in some cases prolapsed appendages. The uterus will invariably be found affected, and at all stages of the disease.

In making a diagnosis of such a case we have been taught of late with much vigor not to neglect the conditions external to the uterus, the presence of which greatly modify the effect of our therapeutic efforts. So great has been the solicitude for this portion of the affected organs that scant attention is paid to the uterine trouble itself, in spite of its importance in the chronological order in which the parts are affected.

From the point of view of the prevention of tubo-ovarian inflammation attention to the condition of the uterus is most essential.

There can be no doubt that these attacks are all primarily catarrhal in origin, having an original focus of infection in the uterus, if not in the vagina. The vaginal seat of infection may be wanting, as in virgins, in whom a catarrhal affection may take its origin in the uterus from disordered menstruation, but in all cases it is in the uterus in which the lingering catarrhal condition remains long after its disappearance from the vagina. A subacute ascending inflammation of the mucous tract attends and follows the uterine catarrh in many cases, making an endometritis always deserving of our most careful attention, for it is while the disease is yet confined to the uterus that its cure constitutes a virtual prevention of tubo-ovarian catarrh. This is apparently a self-evident fact, yet a much neglected one.

I need hardly remind you that the present attitude of most specialists in the diseases of women is one of engrossing attention to tubal inflammation coupled with a practical neglect of its antecedent and initial lesion in the uterus. Completely occupied with the gross and harsh remedy for the former involved in their removal they call all attempts to intelligently direct the process towards repair "tinkering," and present to us the spectacle of medical efforts only actively concerned in finishing the work of destruction rather than staying it.

No continuous muco-purulent discharge from the uterus should be neglected, particularly if it occurs in young girls. By early arrest of this process, in cases diagnosed as simple endometritis or endometritis associated with painful menstruation—menorrhalgia—I have had the satisfaction of restoring more than a score of girls and women to the enjoyment of full womanly health, in spite of the fact that some of the cases presented sufficient tubo-ovarian involvement already to induce other physicians to counsel an unsexing operation.

In the treatment of the uterine affection nothing is equal to the positive pole of the galvanic current within the uterus, in doses from 15 to 25 milliampères. In cases that resist this remedy I have recently resorted to a modification of a method introduced by me: zinc-amalgam cataphoresis, which adds to the microbicidal and alterative effect of electricity the effect of nascent oxy-chloride of zinc and mercury released by electrolysis in immediate contact with the diseased mucous membrane. If the affection has already reached the tubes and ovaries all intrauterine treatment must be used with caution though still essential at intervals, the greater number of the applications being vaginal. If the general health has been affected by long continuance of the disease, or by a natural nervous erethism, we must conjoin with this treatment the main features of the rest cure and general electric treatment.

This method will be at times successful in cases that have reached the stage of purulent accumulations in the tubes, the curative process ascending from the uterus as the diseased process had ascended, resulting in a drainage of the tube through the uterus.

But the uterine route is by no means the only one to reach the tubal and ovarian mischief, whether the uterus demands treatment or not. We can hasten absorption of effusions and infuse new tone into relaxed glandular and muscular tissue by stimulation of the lymphatics and sympathetic nerves of the pelvis. The clinical importance of these two sets of draining and controlling agencies is too often neglected. On them alone depends the practical restoration of organic and tissue integrity, and any method by which they may be directly stimulated gives us the means of initiating an active remedial process. The usual remedies now employed for this purpose are copious hot vaginal douches and application of tincture of iodine to the vault, both or either being at times of marked service. A more efficient stimulation of the lymphatics in chronic cases is the negative pole of the galvanic current, applied by means of a moist cotton-covered electrode. If this is properly placed to include the local trouble between it and the opposite pole the current bulk will traverse the affected structures, and in the tissues surrounding the electrode there will be a marked quickening of trophic processes. To lesson congestion, remove pain and tenderness and contract relaxed muscular tissue the fine faradic current should be used with a bipolar instrument, daily or thrice weekly.—G. Betton Massey, M. D., in *The Maryland Medical Journal.*

PEDIATRICS.

THE TREATMENT OF UMBILICAL HERNIA IN CHILDREN.

Cahir (*Rev. de Chir.*, April, 1895) lays down the following rules as to the treatment of umbilical hernia in infants and young subjects. Apart from certain exceptional conditions in children below the age of eighteen months, whether of rich or poor parents, attempts should be made to cure the hernia by a firm pad and an abdominal bandage. In such cases a flat pad should always be preferred to a conical one. Children from two to seven years, if belonging to well-to-do parents, and well cared for, should be treated in like manner; but if the parents be poor, hard-working, negligent or ignorant, it will be found useless to attempt any cure of umbilical hernia by such simple means. There are no good grounds, the author states, for attributing to this treatment of umbilical hernia the subsequent protrusion of a hernia sac in the inguinal region. If any temporary affection of the respiratory organs, such as bronchitis, whooping-cough, or laryngitis, should occur during the application of the pad and bandage, such treatment ought to be interrupted whilst the chest trouble lasts, and afterwards renewed and steadily maintained. Operative treatment by one of the numerous modern methods is indicated in the following cases: (1) When an umbilical hernia in an infant causes symptoms of strangulation, or is associated with persistent gastro-intestinal troubles which cannot be attributed to any other cause. (2) Also in young subjects from two to seven years of age in whom like symptoms are caused by umbilical hernia. (3) In children from two to seven years of age, suffering from umbilical hernia, who in consequence of defective means of retention or of careless treatment remain with the hernia in much the same condition after the use of pad and bandage continued for twelve or eighteen months. (4 In children over seven years of age suffering from unmanageable or irreducible hernia presenting a tendency to increase in size. (5) When the skin over the hernial swelling is ulcerated and inflamed. (6) When the existence of an umbilical hernia is likely to interfere with the patient's career in any special calling. (7) When the hernial ring is large. (8) When the patient is subject to strangulation or to inflammatory attacks. (9) When the hernia, by exciting pain and gastro-intestinal disturbances, seriously impairs the development of the young subject.—*The Times and Register.*

ADENOID VEGETATIONS IN CHILDREN.

Chaumier (*La Med. Infant*, December, 1894) insists on the importance of recognizing and treating adenoid tumors of the naso-pharynx in children In children who keep the mouth open day and night, who snore, who have high palates, prominent upper incisors irregularly placed, and prominent chests (tendency to pigeon breast); in children who are deaf, or liable to attacks of deafness, with, perhaps, earache; in children who are liable to frequent attacks of sore throat, or to attacks of coughing which the parents attribute to bronchitis; in children with night terrors, false croup, and spasm of the glottis, the physician ought to think of the probability of adenoid vegetations. Enlargement of the faucial tonsils is commonly accompanied by enlargement of the pharyngeal tonsil. Owing to its close anatomical relations with the opening of the Eustachian tube, the affection of this tonsil may be a more important lesion than the enlargement of the faucial tonsils. Treatment of the faucial tonsils will have no effect on the overgrowth of the pharyngeal tonsil. Apart from the ear affections, which inflammation of the tonsils may determine, it may be the cause of ephemeral attacks of fever, which are often attributed in young children to teething, and in children a little older to " growing fever, " to " ganglionic fever," or to gastic disturbance. Chaumier believes that adenoid vegetations may also be at the root of many cases of recurring tracheitis, bronchitis, and bronchopneumonia in children. The interference with the free entrance of air favors the development of the special microbes which are the immediate causes of these affections of the lungs. The same holds good, he thinks, for pneumonia also. Chaumier believes also that adenoid vegetations are the determining causes of the deformities of the chest observed in rickets, the softness of the bones rendering the results of long-continued respiratory obstruction more pronounced. The connection between night terrors and adenoid vegetations in the pharynx is shown, he says, by the fact that they are always to be found in children suffering in this way, and by the further fact that the night terrors cease or notably diminish immediately after the removal of the vegetations. To this list of troubles following on the obstructed condition of the naso-pharynx, he adds incontinence of urine and various nervous symptoms commonly attributed to hysteria. Most children with adenoids are "nervous." As to treatment, he considers that medication is useless, and that surgical treatment is simple, safe and efficacious.—*British Medical Journal.*—*Archives of Pediatrics.*

MEDICAL MELANGE.

TEN LAW POINTS IN REGARD TO LEGITIMACY.

(1) All children born in lawful wedlock are legitimate, unless non-access or impotency on the part of the husband be proved. (2) When a woman lives in open adultery, the husband not living in the house with her, though there be possibility of access on his part, the legitimacy of the children cannot be maintained. (3) Children conceived previous to marriage, but born in wedlock, are legitimate. (4) Children born out of wedlock become legitimate on the subsequent marriage of the parents. (5) Parents cannot give evidence against the legitimacy of their own children. (6) Posthumous children born within a reasonable time after the death of the father are legitimate, unless non-access or impotency be proved. (7) A father does not acquire tenancy " by courtesy " in his wife's estate on account of a living child, delivered by Caesarean section after the death of the mother, though the child is legitimate. (8) All children born after the divorce of the parents are illegitimate, though conceived in wedlock. (9) If a man marry a woman, having children by another man, though she be a widow, he incurs the support of these children, though this does not

make the children legitimate, unless they were otherwise so. (10) If a man marry a woman at once after the death of or divorce from her husband, and a child be born within such time that it might have been the child of either husband, the wife and second husband are allowed to give evidence as to the child's parentage.—*The General Practitioner.*

LEUCORRHEA IN YOUNG UNMARRIED WOMEN.

In the treatment of leucorrhea in young unmarried women, instances frequently occur in which the usual practice of making an examination to ascertain the condition of the pelvic viscera is so obnoxious to the patient, or is so firmly opposed, that the physician has to abandon it, and have recourse to medicine. In such cases Doctor Slocum has learned to depend upon the specific action which cantharides appears to exercise upon the cells constituting the genital as well as the urinary system. It is probably by direct stimulation of the cell just to the point of successful resistance that the benefit is secured, as the dose is very small. Strangury, or other unpleasant symptom, has not been produced. The action of the drug has been so uniformly satisfactory that when it fails, such results form a strong basis for supecting the presence of something more than simple hyperemia or mild inflammation. Lessening of the discharge is sometimes noted within five days, but in several cases of profuse discharge of four years' and longer duration, the treatment was not successful until after a month's persistent use.

The formula which has seemed the best, contains also the tincture of ferric chlorid, and dilute phosphoric acid. These though probably modifying the action of the cantharides, are only adjuvants. Following is the usual form of administration:

℞	Tincture of cantharides, . . .	xcvi minims.
	Tincture of ferric chlorid, . . .	clx minims.
	Dilute phosphoric acid, . . .	clx minims.
	Sirup of lemon, ...	fl℥ij.
	Water, sufficient to make . . .	fl℥iv.

Misce. Signa—One teaspoonful, in water, after meals.

A MISTAKE IN DIAGNOSIS.

They are telling a good story on a young doctor who recently took his diploma and established himself in a fashionable Parisian quarter (*The Cincinnati Lancet-Clinic*). He was lately called in by a lady suffering from adbominal trouble. He timidly approached the bed, and, without removing the coverlids, slid his hand under the bed-clothing and commenced to practice abdominal palpation. The patient's abdomen appeared to be hot and much swollen, but not painful on pressure. Decidedly, thought the young doctor, there is a collection of liquid here; truly, it must be an ovarian cyst. He then, timidly again, hazarded the following remark: "I desire an immediate consultation;" then wrote an inoffensive prescription, and was about to retire when the lady recalled him to the bedside. "My dear young doctor," said she, "I fear you do not quite understand my case, and have prescribed treatment for the rubber hot-water bag I have over my bowels, and which you have been so carefully tapping on for several minutes." The young man had, indeed, taken a rubber-bag for an abdominal tumor. The lady called in an older and less timid practitioner the next day.—*The College Record.*

PRACTICE.

CASCARA SAGRADA FOR THE ELIMINATION OF URIC ACID.

It seems to be the accepted opinion that the pathology of uric acid is more a matter of defective elimination than of excessive formation. Osler says, "certain symptoms arise in connection with defective food or tissue metabolism, more particularly of the nitrogenous elements; and this faulty metabolism, if long continued, may lead to gout, with uratic deposits in the joints, acute inflammations, and arterial and renal disease."

Not getting the desired results, I was led to drop all the so-called antilithics, and rely simply and solely upon a single remedy—cascara sagrada. Repeated trials have convinced me that the faulty metabolism is more quickly remedied with this drug alone than with any other or combinations.

Mrs. G., aged fifty-five, was for years subject to uric-acid storms, and without getting relief. I exhibited the aromatic fluid extract cascara made by Parke, Davis & Company, in ten to fifteen-drop doses, two or three times daily as demanded, finally settling down to one single dose at the close of the day. The effect was not at once apparent, but within two weeks there was marked amelioration of the aggravated symptoms, and in four weeks the swollen joints had almost resumed a normal appearance, the soreness having nearly disappeared. At this writing (two months having elapsed), there is no complaint whatever, but the remedy is continued. No change was made in the diet, as I desired to more fully test the remedy, and am fully satisfied that the good results were due solely to the cascara. I have tried other brands of cascara, but they have not been satisfactory, hence I have come to regard the fluid extract above alluded to as the only one upon which I can confidently rely. It never fails, hence my preference.—Doctor W. H. Walling, in *The Medical and Surgical Reporter*, July 14, 1894.

NEW OBSERVATIONS ON TRIONAL.

In my private asylums for the insane I have employed trional during twenty-eight months, and in my opinion this remedy has acquired a permanent place among the therapeutic measures at our disposal.

Trional is administered in doses of 1.0–3.0 grammes at bedtime and is best given in a kind of punch made with warm water and a spoonful each of cognac and syrup of orange. The patients and especially those who have a repugnance towards drugs readily take it in this form. One-half to three-quarters of an hour after its administration a tranquil sleep occurs which lasts from five to eight hours, and from which the patient awakes refreshed, without unpleasant sequelæ. Trional acts rapidly and effectively in simple nervous agrypnia, in the restlessness and insomnia of neurasthenics, in melancholia unattended with delirium, and in mild cases of maniacal and hallucination disturbances. It apparently does not act in the insomnia of general paralysis and in psychical excitement of a pronounced type. In several cases, especially of chronic character, trional was employed in alternation and combination with morphine 0.01 gramme or codeine 0.02 gramme with excellent results, although these three remedies when administered singly proved ineffective.

Experiments with trional in fractional doses in conditions of excitement were unsuccessful.

In larger doses it surpasses chloral and morphine and has the advantage over them of remaining effective and of not giving rise to unpleasant sequelæ when its administration is prolonged over two or three months.

After extensive and prolonged experimentation (3000 administrations) I am able to recommend trional as an excellent hypnotic, and predict for it a permanent success.

'Professor Obersteiner, Physician to the Private Insane Asylum at Ober-Dobling, Vienna, expresses himself favorably as to the value of trional as an hypnotic. In 1893 Doctor Randa, Assistant of Professor Obersteiner, published a series of satisfactory results obtained in this asylum (*Internat, Klin. Runsch.*, Number X, 1893). The smallest effective dose was 1.5 grammes, while 1.0 gramme was sometimes followed by a full action. In all the cases trional proved an excellent hypnotic. Since the publication of this report more than a year has passed, during which the remedy has been employed by both physicians both in hospital and private practice.

Professor Obersteiner formulates his results as follows: Trional is an excellent hypnotic. Frequently 1.0 gramme is sufficient to produce a prolonged and quiet sleep. I have never exceeded the dose of 2.0 grammes. It has two properties which do not belong to sulfonal. It acts more rapidly and has none of the inconveniences of sulfonal; if perchance after effects should be developed they are much less marked. The more rapid action of trional is due to its more rapid absorption, decomposition and consequently more rapid elimination. —Doctor Svetlin, of Vienna.

CLINICAL NOTES.

THE Rio Chemical Company, of Saint Louis, Missouri, have issued a complete map of the world, which they are mailing to every physician in the United States, Canada, and Europe. Its revision is up-to-date. If you are not already the possessor of one make application to this wide-awake firm.

PAS-CARNATA—WHAT IS IT?—The active medicinal principles of passiflora incarnata presented in the form of an agreeable cordial as the ideal hypnotic, antispasmodic and antineuralgic. It is the remedy *par excellence* in infantile convulsions, in diarrhea of children, and in nervous affections of the aged and infirm. In these and kindred diseases it fills a place in medicine which will promptly recommend it to the observant physician. Cordial Pas-carnata was introduced and is alone prepared by the William S. Merrell Chemical Company of Cincinnati, Ohio.

TONGALINE in tablets, in addition to tongaline, liquid, is now made. Each tablet contains: Concentration of fluid tonga, one grain; sodium salicylate, five grains; cimicifugin salicylate, one-eighth grain; pilocarpin salicylate, one two-hundredth grain; colchicin salicylate, one one-thousandth grain. All the salicylic acid in tongaline is made from the pure oil in wintergreen. Tongaline and lithia tablets—tongaline, five grains; lithium salicylate, one grain. Tongaline and quinine tablets—tongaline, three and one-half grains; quinia sulphate, two and one-half grains. Each tablet is equivalent to one-half drachm of the liquid and two tablets should be administered at a dose.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

SOME CURRENT ERRORS RESPECTING INSANITY.*

BY C. B. BURR, M. D., FLINT, MICHIGAN.

THE gloom encircling the problems of mind which centuries of study have failed to do more than dimly illuminate, the peculiar manifestations of those diseases characterized by disturbance of the mental operations, and the frequent necessity for hospital or custodial care for those afflicted by disorders of the intellect, have caused insanity to be regarded in former times as practically outside the bounds of general medicine and withdrawn it largely from the day-today experience of those treating other diseased conditions. It is by no means uncommon at this day to hear from physicians the admission "I know nothing about insanity." Sometimes, I regret to say, this expression is accompanied by a manner which indicates that, slight as the knowledge is, the desire for information on the subject is less.

The alienist, until recent years, has occupied a field unencroached upon by the general practitioner. He has lived to himself, professionally speaking, and while he has done much good for patients in his special department of medicine he has been looked upon less as physician ministering to the necessities of diseased human beings, than custodian of the deranged and irresponsible. Fortunately, however, for his own advancement, for the interests of scientific medicine, and above all for the well-being of patients committed to his care, he is no longer content to occupy a quasi-medical position. He has advanced his work to a high professional plane, he has introduced the hospital idea into asylum management, he has corrected evils, has reformed abuses, has adopted high ideals, has labored to remove sentimental barriers which have separated him from the practitioner in other fields, to break through the atmosphere of mysticism which has environed the objects of his care and remove the prejudice and suspicion with which his efforts were constantly hampered. All honor to the alienists of this latter half of the nineteenth century through whose existence the condition of the insane has been so much ameliorated. All thanks to brother practitioners in other fields through whose coöperation it has been practicable to obliterate the line of demarcation heretofore existing between the alienist and doctor, between the clinician in brain disease and the clinician in any other department of pathology.

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* Annual Address on Medicine before the MICHIGAN STATE MEDICAL SOCIETY, at Bay City, on June 6, 1895.

It is not an overstatement of the case to say that the treatment of the insane has been practically revolutionized in the last fifteen years. The few text-books on insanity available at the time the present generation of asylum men entered the specialty are now for the most part fallen into innocuous desuetude. The important works of CLOUSTON, SPITZKA, SAVAGE, KRAFFT-EBING, BEVAN LEWIS, STEARNS, REGIS and others have been published during this period. The professional demand for information on this obscure subject has necessitated such remarkable literary activity.

CLOUSTON, of Edinburgh, could write in 1884, "When we consider that one in every three hundred of the population is a registered certified lunatic, the marvel is how our profession has hitherto got along so well with so little systematic teaching or clinical experience of mental disease." Now, on the contrary, in every school of consequence in America and abroad, insanity is taught clinically and didactically. The assistant physician no longer comes into the work of the hospital or asylum as did your orator with no knowledge of insanity save that derived from the cursory reading of a little book, "Sheppard on Madness," found in a preceptor's library. The recent graduate is fairly grounded in the subject, can differentiate forms of disease, would not be at a loss in general practice to prescribe for an insane patient, and would deem it discreditable to say "This patient is insane and should be sent to an asylum," giving no reason for his opinion, and not attempting a discriminating diagnosis. He can speak advisedly as to whether the patient will be benefited or otherwise by removal from home, and can apply rules for guidance of the case as he would for a case of pneumonia. In this day and age, the asylum physician does not content himself with clothing, feeding, and ministering to the intercurrent ailments of his patients but hospitalizes all of them, is on the lookout for indications for treatment, prescribes his moral and medicinal measures with a true scientific spirit, and meets the varying conditions and necessities of cases on the same principles which would govern him in amputating a finger or prescribing for indigestion. What he does is intangible in great measure. He cannot always explain in what his moral treatment consists, but that it is applied with the same degree of precision which governs the general practitioner in his relation with cases of typhoid fever admits of no doubt among those familiar with his methods. He can be assisted in his work and the public and profession brought into closer and more intelligent relationship, if a few current errors which the general practitioner in his incidental capacity of public educator is competent to correct, are removed, as stumbling-blocks in the way of progress.

I have taken for my subject therefore "Some Current Errors Respecting Insanity," and ask you to listen patiently if what I say may seem trite or axiomatic. Be it remembered that the orator of this section is not here by his own election; he must perforce discourse of something and is circumscribed by certain conventional limitations. He may write of the history of medicine or the progress of medical science—fields tolerably well worked in meetings of this character and perhaps no longer susceptible of fruitful cultivation. He cannot be special; he must not be clinical; and if he may not aspire to the high plane of original investigation upon which my distinguished predecessor stood, and finds his abilities and aptitude for philosophical disquisition unequal to the demands of the occasion, he is possibly deserving of pardon if he lapses into criticism.

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The First Error to which I would fain allude is that of regarding any form of insanity a *mental* disease. The expression is convenient but misleading. Insanity is a general term which comprises those maladies displaying prolonged disturbances of consciousness dependent upon the derangement of a bodily organ, the brain. Mental operations are functions of the brain, or at all events brain integrity is necessary to their perfect performance. They are performed through the muscular apparatus and dependent for their perfect expression upon the sanity of all the tissues of the body. The late Doctor Buckham, in his interesting work, "Insanity in its Medico-Legal Relations," says: "As the elements of our experience are dependent upon sensations it inevitably follows that if our organs of sense are diseased or disordered the respective sensations will be defective or distorted consequent upon the disease or disorder of the medium of transmission. If the optic nerve, for instance, is diseased the true representation of the object will not be conveyed to the sensorium, nay, it is not necessary for the nerve of any of the senses to be diseased; a slight disorder consequent upon disease of other organs will materially change or modify the sensations.

"All seems infected that the infected spy,
"As all looks yellow to the jaundiced eye."

"To offer proof of that which can so readily be verified by obervation is unnecessary. Such modifications are of every-day occurrence in the lives of physicians, and every person who has with any care noted his own feelings cannot have failed to observe the different appearances of the same scene, dependent wholly upon his surroundings, his associations, or even upon the condition of his liver, stomach, or bowels.

"It is, then, indispensably necessary to a true representation of the object in the sensorium that the organs of transmission should be in health. From the primary impression on the terminal branches of the nerves of sensation, through all the degrees of progress, as sensation, ideation, and volitional impulse, to the external manifestations of these mental operations, the physical media must be healthy if the manifestations are normal, and *vice versa*, if the media are diseased or disordered; *pari passu*, the manifestations of the mind's operations will be abnormal, disordered, some of which disordered mental manifestations are called diseases of the mind, insanity, when in reality they are the result of diseased or disordered physical media, while the mind, as far as we know (assuming for it an existence as a distinct entity), is not the subject of disease."

He further says: "If the mind can be diseased, then, if the disease be sufficiently prolonged and intensified, *the mind must die*. Having no direct or primary proof of the existence of mind, it must be considered in the light of the secondary evidence furnished by the manifestations of its operations through physical media."

"On what theory, or even hypothesis, other than that of diseased physical media, can the medication of the insane be otherwise than irrational and absurd? What do physicians know of the constitution of the mind, on the assumption that it is a distinct entity, and subject to disease? Or what do physicians know of the therapeutic action of material remedies on an immaterial mind? The idea of curing an incorporeal, intangible, entity by the use of material remedies is so utterly absurd that it is difficult to suppose a man sane who entertains it. But on the theory that the disordered mental manifestations are the result of diseased physical media, the exhibition of material remedies to cure material disease is rational and proper, and if, by the administration of suitable remedies, disease is removed from the media, then the manifestations of the mind's operations again become normal and natural; and it is notorious that such is the effect of medical treatment in many cases of insanity. When a case of insanity is cured by medical treatment it is obvious that physical not mental disease has been beneficially treated, and therefore those cases which are so cured were unquestionably cases of insanity due to physical causes; *id est*, 'diseased media.' Had the sage who centuries ago wrote '*mens sana in corpore sano*' that idea in his mind?"

Pardon the lengthy extract from the pen of this distinguished author, a resident of Michigan during the best years of his life, and a member of this society. It is so good and so creditable to its author and the profession of Michigan that I could not forbear quoting it *in extenso.*

BLANDFORD says: "What then, you ask, is meant by this legal term unsoundness of mind? In what way does it become a branch of medical study and practice? By what application of the art and science of medicine is it to be removed? The answer is that unsoundness of mind is but another term for disorder of the human brain, or rather of that portion of nerve matter which has for its function that which we call mind and mental operation."

MERCIER says: "Not only do the laity regard insanity as a disorder of the mind, but all the numerous medical definitions of insanity—and every writer on the subject has proposed at least one, however much they differ in other respects—agree in this, that they regard insanity solely as a mental disorder. This is the first misconception of which the student of insanity has to rid himself. Insanity is always regarded as a disorder of the mind. It is not so." He further says: "Insanity, we find, is a disorder of the adjustment of self to surroundings. This adjustment of self to surroundings is effected by the highest of all the nervous arrangements, and the central and primary factor in insanity is the disorder of these arrangements. Dependent on this central disorder are other disorders, first, conduct which it is the function of the highest nervous arrangements to actuate, is disordered; and second, consciousness which accompanies the workings of the highest nervous arrangements, is disordered."

SPITZKA, with his accustomed terseness and directness of utterance, says: "Insanity is a term applied to certain results of brain disease and brain defects which invalidate mental integrity. It is inaccurate to state that insanity is itself a disease. It is strictly speaking merely a symptom which may be due to many different morbid conditions having this one feature in common that they involve the organ of the mind."

Accustomed, as we are, to speaking of those diseases of the brain which involve consciousness as mental diseases, expressions of the nature of these read are apt to produce shock and antagonism. Viewed in their proper light, however, their rationality becomes manifest. Take for example the intimate connection between the emotions and their physical expression. We are permitted no opportunity to regard the one apart from the other. What mean the heart-ache from bad news, the pallor of fright, the frown of dislike, the flush of anger, the smile of satisfaction? It is not mere poetic license which refers strong depressing emotions to the chief organ of the circulatory apparatus, but an indication of the indissoluble union of the mental and vital functions. It is not imagination alone that associates them with the stomach. Let an emotion be intensified, as observed in some forms of melancholia, and there appear all sorts of delusions referable to the abdominal organs. As a matter of fact the personality is made up through sensations carried to the brain from bodily organs, and registered in the organic memory. Our personality at any moment represents the sum total of these impressions. When this outflow and inflow of nervous energy are normal, we experience a sense of well-being; when the current is excessive, maniacal manifestations, exaltation, too great buoyancy appear; when reduced, depression may display itself and find its extremest expression in melancholia. It is no unusual experience in hypochondriacal melancholia to hear the complaint of absence of the abdominal organs. The patient will not eat because he believes he has no stomach and cannot digest his food. The nervous current being interrupted by the depressed cerebral tone, disturbances of consciousness appear, there is a misinterpretation of organic sensations and a delusional state develops.

I well remember many years ago treating a patient who complained of a mouse within the abdomen. He was accustomed to strike himself with great violence for the purpose of killing the mouse. It was discovered post-mortem that he had probably for years suffered from chronic peritonitis. The epiploön was a mere fleshy band extending diagonally across the abdominal cavity and attached by inflammatory adhesions to the pelvis. Similarly in kidney disease, in disease of the heart, and disease of the lungs, there may appear a variety of delusions, consequent upon disturbance of nervous transmission and registration. The idea of poison is common among tubercular patients; of infernal machines operating upon the body in cases of internal tumor; and of poisonous gases and choking from disturbance of the heart's action. Every case of insanity is attended by reduction of physical force; in every instance its cause is to be looked for in a bodily condition, either an arrest of cerebral development from evolutional or antenatal causes or in physical wear and tear. My experience teaches that the so-called moral causes of insanity operate through the physical system. Grief, care, anxiety, domestic unhappiness produce disturbances of the mental operations through interference with sleep, appetite and the bodily functions. It is true that a wide difference in the susceptibility to emotional causes of insanity exists in different individuals, but this is accounted for by variations in organization and development.

A proper recognition of the physical basis of insanity is an indispensable requisite to scientific treatment. In every case of acute insanity, a reduction of nervous energy, an undue expenditure of nerve force, are taking place. The balance between waste and repair is lacking and the aim of the physician should be to conserve the physical energies, build up the strength and restore the lost balance. While excitement should be curbed and checked and kept within bounds, the danger of increasing it by injudicious restraint should ever be borne in mind and where facilities for proper exercise, quiet, and freedom from irritating control are not attainable at home these should be early afforded the patient by a change in surroundings.

* * *

ERROR NUMBER II is the legitimate child of error number one. From the confusion surrounding the subject a legal theory and a medical theory of insanity are current. The relation of crime and irresponsibility has been the fruitful source of medico-legal tangles discreditable alike to both professions and particularly prejudicial to ours. Fortunately the ancient and absurd legal test of insanity, an ability to discriminate between right and wrong, is fast falling into decay. Few indeed among the insane but have knowledge of right and wrong in the abstract. The ability to abstain from the wrong and do the right, however, may be in the same class of cases absent. Irresistible impulse, the result of impaired volitional control, may exist in the mind of one insane who has a perfect recognition of the calamitous consequences which might result from his infirmity, and an earnest desire to repress morbid impulses. I have in mind the case of a gentleman, formerly under treatment in the Eastern Michigan Asylum, whose knowledge of right and wrong was as good as my own, but who at times was seized with an impulse to kill his wife, an impulse he found it impossible to resist, notwithstanding his devotion to her. On this account he sought refuge in the asylum and did not dare separate himself from its restraining influences although free while there from any homicidal or dangerous tendency. Of late the legal precedent has been established in at least one celebrated case of homicide in the East, of admitting the insanity of the homicide but condemning him to imprisonment as responsible for his act. It strikes me that on no tenable medical ground can this be defended and that it amounts practically to a judicial begging of the question. If on the ground of public expediency it is desirable to punish an insane criminal, this excuse may be employed with better consistency than to adopt the feeble make-shift of limited responsibility in insanity. No expert can determine the strength of an impaired will, no jurist can measure the force of delusional impulsion. Incidentally it may be remarked that the medical jurisprudence of insanity in Michigan is improving vastly. It is becoming in the courts more and more a rule of practice in doubtful cases, or in cases of suspected feigning insanity among criminals, to have the truth determined by a medical commission. Much time, expense, and discomfort are saved by this wise legal provision. Concerning the commissions of which I have known, it is but just to say that their work has been well performed. No important mistakes have been made, no injustice has been done. Medical men may do much good by favoring the appointment of such commissions. Let them advocate them and urge that they shall be composed of men of high character and attainments. As to commissions themselves, if after rigid investigation, doubt still exists as to the merits of the case this doubt should be frankly stated. Nothing is gained in court or elsewhere by assumption of knowledge. No opinion should ever be signed which cannot afterward be fully defended if occasion demands. Above all, jealousies or prejudices should not be permitted to interfere with harmonious and temperate action. By these means an exalted plane of usefulness will be attained, the profession elevated, and many of the frequent discreditable exhibitions of partisan expert testimony be avoided.

The old question as to what constitutes "legal insanity" and what "medical insanity" may obtrude itself sometimes, but with advance in medical jurisprudence it must less and less frequently appear. **Spitzka** says: "On some occasion the question of defining what is called legal insanity may be presented to the reader of these lines. When that question is asked he may safely challenge the questioner to show him a broken leg or a case of small-pox in a hospital ward which is not a broken leg or a case of small-pox in law, to show him a tumor or a softening of the brain which is meningitis or sclerosis in law, or to define the conditions under which any disease symptom becomes an indication of health. When these conditions are complied with, and not until then, may the physician attempt to define 'insanity in law' as distinguished from insanity in science. In the meantime he may rest contented with the dictum of one of the best legal authorities that that cannot be sanity in law which is insanity in science, just as nothing can be a fact in science and a fiction in law at one and the same time."

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These are high moral grounds and the words have a gratifying ring. Too literal construction of them, however, may lead the practitioner into **Error Number** III, that of applying the strict medical test in opinions as to testamentary capacity. It is manifestly just that in the disposition of property considerable latitude should be given, and that lines concerning delusions, eccentricities of conduct, and perversions of feeling should not be too closely drawn, provided it is clear that the infirmity of judgment and will under which the testator is laboring does not lead him to make a disposition of his property which he would not have done had the infirmity not been in existence.

Stearns lays down the principle that "only when the mind has become so far impaired that the person is unable to properly understand the relations he sustains toward his heirs at law, or is influenced in his feelings toward them or others by delusions or unjust suspicions and insistent ideas; or, when he becomes incapacitated to understand the immediate effects of his will upon the members of his family, or their respective claims upon him, or his own duties and responsibilities toward them; or, again, has been subject to undue or improper influences to such an extent as to will away his property from his legal heirs to others whose claims are not valid, or otherwise make wrong disposition of it,—will the court be likely to decide that the person has not sufficient testamentary capacity?"

This is a good doctrine. The existence, for example, of the delusion of unworthiness to live, or of immaculate birth, would not necessarily prevent the disposition of property in accordance with well recognized principles of right and perfect consistency. It is probable that a considerable proportion of patients suffering from melancholia with depressing delusions would be able to make wills with perfect correctness and unprejudiced by morbid judgments.

Courts have held good wills made by insane persons in asylums, and "patients with insane delusions that did not affect the provisions of the wills, have been held by the highest tribunals to have made good wills" (**Clouston**).

Savage says: "If a will is distinctly the representative of the desires expressed by the individual during his life, it would be upheld although the person could be proved to have been insane." I have, myself, known a patient whose case had proceeded to extreme dementia, to make a valid will. The patient was barely able to answer the simplest questions in monosyllables; indeed, to all appearance would reply "yes" indifferently to questions. The disposition of his property happened to be in accord with right and was looked upon as a too tardy act of justice. Notwithstanding expert testimony as to his incompetence (testimony which it was impossible for those to escape giving who were familiar with his mental condition), his will was admitted to probate.

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ERROR NUMBER IV is that of regarding patients "sane on all subjects but one." It is the extremely exceptional patient of whom this can truthfully be said. Insane ideation is prone to manifest itself in a single delusion or set of delusions, the judgment upon other matters being apparently unimpaired. The capacity for indulging a fixed delusion, however, argues a serious weakening of the logical apparatus. There is reasoning from false premises or conclusions are drawn from totally inadequate data. There is also impairment of the ability to correctly group concepts to form judgments, or judgments to form new judgments. Cerebration is usually in these cases affected more or less in its entirety. There will be found shades of impairment in memory, faulty perception, lacklustre of intellect generally, and disturbances of will and inhibitory control. Of one class of cases (the paranoiac) it can more properly be said than of any other, that a patient is "sane on all subjects but one." Here the logical thinking apparatus is intact, according to KRAFFT-EBING, reasoning being correct but from false and inadequate premises. In this class of cases, however, change of environment or habits is likely to affect the character of the delusion and the form of its expression.

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Discussing this subject I am led to speak of ERROR NUMBER V, the belief in "harmless insanity." The existence of an insane delusion on the part of a member of any community is a menace to its safety. The more natural the patient in his habits and daily walk, and the more plausable in conversation, the greater the menace. Graveyards are recruited constantly through the conduct of the "harmless" crank—"sane on all subjects but one." The paranoiac, unrecognized politically, without encouragement in his inventions, disregarded in his efforts toward social preferment, teased by the trying small boy, led on by the trifling and inconsiderate, who for a moment's diversion tempt him to still greater flights on the wings of his delusions, has suddenly became an avenger. He slays the supposed author of his troubles believing himself a public benefactor. Thus did GUITEAU, thus did the slayer of CARTER HARRISON. It is the duty of the medical profession to keep ever alive in the public mind the responsibilities it assumes in tolerating in its midst the "harmless" insane person.

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ERROR NUMBER VI is that loss of memory is necessarily an accompaniment of insanity. Except in cases of dementia, paretic dementia, and chronic forms of disease, this may not be a conspicuous failing.

Error Number VII is the belief that an insane person's delusion should be accorded with "You are my brother, aren't you?" or, "Don't you believe I made the world?" the physician will be asked. Ignore such questions if possible and the patient is not too persistent, but if called upon to answer be perfectly honest and insist upon the attendant and family bearing the same attitude toward the patient. A mere assertion of a delusion, provided confirmation of it is not asked, need not be met by negation, but one should never permit himself to fall into the error of deceiving through motives of expediency. "He is the first man that helped me," said a patient of mine pointing to an attendant standing near. "I asked him if I was a prophet and he said 'No; you are not,' and it set me to thinking. At home when I said 'Do you see that bright light coming out of my side?' they all replied 'Oh, yes; we see it distinctly; it is very dazzling.' They confirmed me in my false notions." Argument rarely effects change in delusional ideas and need not often be resorted to, but truthfulness and candor in dealing with patients should never be departed from.

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Error Number VIII comes from applying the test of delusions to all cases of insanity. I know a conscientious and competent physician who will not certify any patient as insane who does not display delusions. Many cases of dementia, a large number of cases of senile dementia (among the most difficult and trying which the alienist is called upon to care for), and occasional cases of melancholia would, under this hard and fast ruling, be debarred from hospital privileges in Michigan. States of mental depression amounting to complete gloom, and despair even to suicidal impulsion, do, I am satisfied, occasionally exist without manifest delusions.

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What marked kinship exists between genius and insanity? I am inclined to believe that Error Number IX may be found in the oft-repeated assertion that there is such. That geniuses become insane through too close application in some particular mental groove is possible, but I am indisposed to think that the existence of genius, properly so-called, is a menace to the person's mental well-being. If his invention or his literary efforts occupy his entire working hours, interfere with his rest at night, and prevent him from exercising and taking food at regular periods, the physical causes of insanity become operative. If he occupies himself in one line to the exclusion of every other diversion and mental exercise, his horizon will be apt to become contracted, but this does not constitute insanity. Insanity is "a prolonged departure from the individual's normal standard of thinking, feeling, and acting." Habitual exercise of normal facilities in one particular line would not cause the individual to be thus classed. It has been said of almost every writer of prominence in poetry and philosophy that he was mad, sometimes because he took opium, sometimes because he did not pay his bills, sometimes because he carried his money in his hat. The excessive development of the imaginative faculty in poetic constitutions has given rise to such statements. The isolated life, the narrow view, the speculative turn of mind, have impressed contemporaries with the variation from conventional lines of conduct. The error has arisen from judging of the mental action of a single individual by an arbitrary standard for men in general, rather than looking upon each erratic conduct as is present in the light of deviation from the individual's normal. As a matter of fact, the difficulty has been that every unprofessional body has regarded himself "something of a doctor" when speaking of insanity. Remarks such as this by KATE SANBORN, in her work on the "Vanity and Insanity of Genius," have too long passed current for expression of truth: "TAINE is right when he declares that the difference between a madman and a man of genius is not very great. NAPOLEON, who knew men, said so to ESQUIROL." What, forsooth, had knowing men to do with passing upon the question of disease affecting the menal operations? She further says that "It is visionary imagination which feigns the phantom of the madman and creates the personages of an artist, and the classification serving for the first may serve for the second." She has the audacity, indeed, to speak of DICKENS thus: "The imagination of DICKENS is like that of monomaniacs. To plunge one's self into an idea, to be absorbed by it, to see nothing else, to repeat it under a hundred forms, to enlarge it, to carry it thus enlarged to the eye of the spectator, to dazzle him and overwhelm him with it, to stamp it upon him so tenaciously and impressively that he can never tear it from his memory, —these are the great features of this imagination and style. In this DAVID COPPERFIELD is a masterpiece." What a lame and impotent conclusion—DICKENS mad because he wrote a vigorous story depicting characters full of intensity and strength. Apply this reasoning to the book of the authoress herself, who has written with fervor and persuasiveness and has manifestly argued herself into a belief in her conclusions, however erroneous they may appear to others. Is this insanity? "BYRON's blood," she says, "was deeply tainted with maniacal infusion" (whatever that is), and "his wife stated her belief and that of her advisors that LORD BYRON was actually insane." His wife, it appears, with rare diagnostic ability had discovered "thirteen instances of absolutely insane conduct in him during their short companionship." Whether any of these insane acts consisted in going to bed with his boots on, or arose from double vision after a gentlemen's dinner party, does not appear. Much stress is laid upon his doleful fancy respecting the future. "I picture myself slowly expiring on a bed of torture, or terminating my days, like SWIFT, a grinning idiot." Evidence of this character is entirely inconclusive. Disappointed ambition, infirmity, the malaise after a night at the club, might have produced in one of BYRON's temperament all this foreboding of evil. Strength of expression exalts the words into the prophetic in this author's mind, whereas calmly viewed they are seen to merely voice the unexpressed plaint of thousands of human beings disaffected with the world and conscious of physical weakness or mental letting down. A writer in the "Encyclopedia Brittanica," speaking of his marital relations says: "A wife who could coldly ask BYRON when he meant to give up his bad habit of making verses possessed a terrible power of annoying such a man. Her perfect self-command and imperturbable outward serenity, her power of never forgetting an injury and taking revenge with angelic sweetness and apparent innocence of vindictive intention must have been maddening." With such a habit of mind it is not difficult to understand that a wife might develop in an irascible egoistic husband, thirteen times thirteen evidences which would pass for those of insanity among the uninitiated.

The hallucinations of SIR JOSHUA REYNOLDS who imagined he saw figures of beings in the trees as he walked; of POPE who once saw an arm come out of a wall and asked his physician whose arm it was; of COLERIDGE and DE QUINCEY in the cerebral excitation consequent upon indulgence in opium, or the absent-mindedness of an AMPERE who brought a bottle of wine from a neighbor's cellar, are not to be regarded as necessarily evidences of insanity. As a matter of fact there is too much amateur and unprofessional writing on this subject. Great geniuses have usually been great brain workers, have frequently burned the nervous candle at both ends, have too often resorted to stimulants and opium to excite imaginative power, have led profligate and dissolute lives under the temptations and flattery with which they were surrounded, and have placed themselves under conditions which jeopardized the integrity of the nervous system.

That there is any legitimate relationship between genius and insanity may be disputed. I have not in my experience discovered such connection. SAVAGE sums up the matter as follows: "I have incidentally referred to genius in its connection with eccentricity and insanity. I am hardly prepared to give a definition of genius, though I would call attention to the fact that it is usually associated either with some special incomprehensible faculty for the dramatic portraiture of self-existent abnormal emotion; or altogether dependent upon a simple over-development of an individual faculty of mind. The first, in a sense, we may call the genius of art; the latter, that of science. With regard to genius, I must say that it is an exception to find patients with unusual capacity of any kind among the inmates of an asylum. There may be found "specialists" of every character and degree, that is, men with persistence in limited pursuits; thus, I have known a patient in Bethlem who devoted years to the delicate polishing of pebbles; and another whose one object in life was to clean windows, while the specialty of a third was still more limited, for his sole aim was to keep bright the brass knobs of the water taps. Therefore, from the point of view of the superintendent of an asylum for acute cases of mental disorder, I can definitely say that it is rare to meet with extraordinary ability among the insane. On the other hand I must, however, admit that in my experience of people out of asylums, who have been credited with genius, I have met with many who possessed marked mental peculiarities and eccentricities. It appears as if there were for each ordinary person an average quantity of nervous power and energy to be expended, and if a larger amount than usual is got rid of in one direction, there naturally results a deficiency in some other quarter; in fact there is loss of balance. Want of balance fairly describes the mental condition of many a genius. How often, for example, has one met with a man of letters, the man of taste and of energy, who objected strongly to being controlled in his lower or more animal tastes? Thus it happens that so many men of genius have given themselves liberty, if not license."

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The expression that "we are all more or less insane on some subject" means nothing to an alienist and very little, I fancy, to the many who so frequently employ it. ERROR NUMBER X, on the part of the physician, is the neglect he sometimes displays to correct impressions of this character.

I do not advocate the position of schoolmaster abroad or persistent pedagogue for the medical man, but he has abundant facilities for removing popular errors and instilling correct ideas about many things. Insanity means nothing to him who confounds it with eccentricity, ebullition of temper, ignorance, illogicality or congenital lack of inhibitory control. Unless there is a deviation from the natural standard (which deviation may display itself in one case in total change, in another in exaggeration, and in a third in slight perversion of natural characteristics), natural organization, lack of education or discipline must be held accountable for conduct and not insanity. In judging of the mental state, ranting expressions such as that of DOCTOR JOHNSON, "I have been mad half my life, or at least not sober," should not be taken too seriously.

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ERROR NUMBER XI.—I have frequently been consulted in times past concerning the possibility of obtaining a divorce from one suffering from insanity. Occasionally the person has come armed with a letter from his physician, sympathizing with the proposed step, and setting forth the difficulties which the husband with, too frequently, a large family of children, experiences in the absence of a housekeeper, or on behalf of the wife, the trials undergone in the past, and the fears for the future in the possible contingency of the patient's coming home. The afflictions suffered by some wives living with insane husbands, whose tempers naturally none of the best, have not been mellowed by disease, are oftentimes very great. Natural compassion would occasionally lead to favoring the contemplated step, not only on account of the family but on the ground of public expediency, and I am not surprised that the family physician, knowing intimately the necessities of cases and sharing the confidence of sorrowing and deserving households, should now and then lend a willing ear to appeals for assistance in severing the legal bonds which have become so irksome. Advice to this end, however, is misdirected, sympathy unavailing. The statutes of this state do not permit divorces on the ground of insanity, and the would-be divorceé may be saved expense and embarrassment, by timely advice from her physician. The enactment of laws permitting legal separation on the ground of insanity has been attempted in Michigan, but has failed. Legislators have feared to open the doors to injustice by placing upon the statute books any act which might militate against the right of a deserving individual in affliction to the consideration and support of him or her who has assumed the solemn vows of matrimony. In a case indeed which came to my knowledge where the mother and daughter of the wife were favorable to the husband's obtaining a divorce, on the ground of deception as to the existence of confirmed epilepsy at the time the marriage was contracted, the courts in an adjoining state to which the husband had moved refused to grant a decree. I do not now remember of divorces from insane persons to have been obtained except in cases where I believed misrepresentation had been made, or where there had been failure to comply with some legal requirement as to service of subpoena.

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ERROR NUMBER XII.—It is occasionally remarked that one who talks much of suicide will not be apt to terminate his existence by his own hand. The public should be taught to beware of this false doctrine. Several successful suicidal attempts have been made in my experience by patients who had given ample warning of this intention. The most shocking act of the kind that I call to mind was made by a patient who repeated over and over "I want to kill me, doctor; I must kill me," for months before she succeeded in carrying the suicidal inclination into execution. In melancholia it is never, and in hystero-melancholia seldom, safe to place perfect confidence in the patient. The hysterical are, as we know, wont to threaten self-destruction to alarm and give concern to relatives whom they are pleased to regard inattentive or unsympathizing. For years I accepted, with a large grain of allowance, the direful threats of this class of patients, and was prone to construe them in a Pickwickian sense. A rude shock awakened me to the danger of placing too much reliance upon these preconceived views. It should not be forgotten, furthermore, that even where no suicidal determination actually exists, an overt act designed to alarm and committed in the expectation that it will be thwarted may result fatally.

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Error Number XIII.—Alienists are frequently called upon to meet an objection to hospital care, raised by friends of patients that the association of one whose mental operations are disturbed with others similarly afflicted, will work harm to the individual. This idea is founded upon an entire misconception of the facts. One is perfectly safe in saying that not one patient in a thousand is injuriously affected by association with others. Such association in the vast majority of cases, so far from being hurtful, is extremely beneficial. A self-centered patient is diverted from contemplation of his symptoms by the society of his neighbors. He recognizes the morbid states of those about him and if mental manifestations in his own and some fellow-sufferer's case are of a similar character the one who has felt himself alone in distress finds a foil to his trouble in the affliction of the other. If in contact with one who has suffered from similar symptoms and improved, the relation of the personal experience of the latter is often beneficial. A melancholiac may be diverted from morbid contemplation by the conduct and conversation of one having maniacal exaltation. I well remember a number of years ago that a patient suffering from extreme mental confusion, depression, and distressing delusions, among which was the fear of poison, was placed in a hospital ward where there was temporarily being treated a patient laboring under mental excitement. This patient talked incessantly and incoherently; was gentle in her manner but very earnest. She conceived a fancy for the depressed patient and directed talk to her. The depressed patient became interested. In her confusion she could not imagine what the other meant by her disjointed words spoken with all the earnestness of the most accomplished advocate. Her attention was strained to the uttermost. There was not room in her consciousness for another concept. She studied and studied but could not comprehend. The attendants noticing the ascendency of the one mind over the other gave into the charge of the excited patient the administering of food to the one depressed. It had been invariably refused previously, but given along with the entertaining talk there was no opportunity for delusions to assert themselves. She accepted food unhesitatingly, improved with great rapidity, recovered, and has since remained well these many years. Her companion also recovered, thanks in a measure no doubt, to her unselfish interest in the invalid. At the expense of digression I would here remark that the excited patient must have had a singularly pure mind. With all the incoherency, the incessant and meaningless utterance of words, words, nothing but words, without the slightest relation or dependence one upon the other; with all this not one objectionable or offensive word ever passed her lips. I regard this truly remarkable. Such incoherence is rarely seen. It seems almost incredible that it could be present without any evidence that objectionable words were ever known to the speaker or had ever been uttered in her presence.

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You will frequently find occasion to correct ERROR NUMBER XIV in the mind of an insane person's friends who fear that homesickness from separation will work injury. Homesickness in one insane is not an undesirable feeling and if present does the patient no harm. In the natural desire for home scenes, the alienist finds one of the most important curative agencies and a great stimulus to endeavor. Substitute homesickness, a natural sentiment, for a delusion and you are supplanting a morbid with a natural idea. If your patient's friends believe that the desire for home, while the disease is uncured, demands a discontinuance of hospital and a resumption of home treatment, you may safely argue against the notion. I do not remember a single case of the vast number I have seen where the desire for home militated against the well-being of the patient or was, in fact, other than helpful.

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ERROR NUMBER XV.—I think there is a general error respecting the relative liability of brain-workers and hand-workers to insanity. As a matter of fact, hard manual work appears to break down more men and women proportionately than brain work. Statistics of the Eastern Michigan Asylum show 2,965 of the former to 848 of the latter in the total admissions for a series of years, or approximately three and one-half times as many hand-workers as brain-workers. Unfortunately it has been impracticable to extract from the state census of 1884, owing to the classification there existing, accurate information respecting the relative proportion of the two classes. In the nature of the question no absolutely exact division is practicable and any division upon the lines mentioned must be more or less arbitrary, but it is my belief that the following estimate will not depart far from the truth:

The state census of 1884 is as follows:

Of all occupations, ...	630,852
Agriculture, ...	237,192
Professional and personal service, ...	161,388
Trade and transportation, ...	69,080
Manufacture, mechanical and mining industries, .	163,192

Of hand-workers I have taken from above—

Agriculture, ...	237,192
Three-fourths of those engaged in trade and transportation, ...	51,810

Three-fourths of those engaged in manufacture, mechanical and mining industries,	122,394	
Total,		411,396
Of brain-workers there remain consequently, those engaged in professional and personal service,	161,388	
One-fourth of those engaged in trade and transportation,	17,280	
One-fourth of those in manufacturing, mechanical and mining industries,	40,788	
Total,		219,456

The above figures show but a little more than twice as many working with the hands as with the brain while the asylum statistics show three and one-half times as many admissions of the former as of the latter class.

Sources of error in these figures must be very numerous. For instance, to include all those engaged in agriculture under manual workers is fallacious. Similarly to take account of all in personal service as brain-workers is misleading; but error on the one side would possibly offset the other. It is manifestly impossible to say what proportion pertains to each of the two classes, but if the estimate of three-fourths is thought to be too high for the manual service the fraction of seven-eighths may be used and the following figures would result: On the one hand 440,709, and on the other 190,153, or practically two and one-half times as many of the former as of the latter.

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Error Number XVI is the belief that insanity is increasing to an alarming extent. It is true that such statistics as we have would apparently justify the fear, but I myself am not at all convinced of the truth of this statement. That there is a relative increase in nervous disease is probable, this due to the absence of any legal restriction upon marriage and the unchecked propagation of the defective classes. I am inclined to the belief, however, that diseases which the alienist is called upon to treat display in recent years a greater tendency to assume organic forms. From this tendency which must operate to shorten life and diminish productivity, it is perhaps safe to predict a diminution in the number of those nervous diseases in which heredity plays so important a part. According to the census of 1884 the proportion of insane in the state was as 1 to 701; of 1894, as 1 to 510, but the fact that in recent years insanity is brought more into view by the increased dependence upon hospital care, and the further fact that foreign immigration adds tremendously to our insane population should not be forgotten. Of 562 admissions to the Eastern Michigan Asylum, during the last biennial period, but 218 were native born, of native born parents. One hundred and nineteen were native born, of foreign born parents, and the large number of 224 were foreign born, a number greater than native born of American parents, and representing forty per cent. of the total admissions.

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Is Error Number XVII the failure to inveigh constantly against the further corruption of American civilization by permitting such unwelcome additions to our political household?

THE PRESENT STATUS OF THE BURIED ANIMAL LIGATURE AND SUTURE IN ABDOMINAL AND GYNECIC SURGERY.*

By H. W. LONGYEAR, M. D., Detroit, Michigan.

Ever since the performance of the first successful ovariotomy by **Ephriam McDowell** the problem of suitable material with which to ligate blood-vessels and pedicles and close the abdominal wound has received the most earnest study of the abdominal surgeon, for after much experimentation of a costly nature to human life, the fact was determined that it was impracticable to treat sutures and ligatures placed within the peritoneal cavity in any other way than by cutting short and leaving them *in situ*. Before the dawn of the new day of asepticism, inaugurated by **Lister**, the wisdom of leaving foreign material within the peritoneal cavity was generally questioned, as it usually resulted in abscess, and peritonitis often following as the supposed result of peritoneal irritation, the question was a very grave one and sorely taxed the courage and ingenuity of the pioneer surgeons of that epoch. Extraperitoneal treatment of the stump by the clamp, the end of the stump seared by the actual cautery, ligatures left long and hanging out of the abdominal wound, and other devices employed to avoid leaving the ligatures within the peritoneal cavity, are now matters of history, but their memory is still fresh in the minds of many of us. Since the knowledge of asepticism demonstrated that it was the microbe that caused the peritonitis and abscess, and not the ligature material, almost every conceivable material in the shape of ligatures and sutures has been placed within the peritoneal cavity. India rubber, iron and silver wire, silk, linen, buckskin, chamois skin, strips of fascia lata, catgut, silkworm-gut, tendons from many kinds of animals, et cetera, have been used for this purpose, and each has been, in its turn, vaunted by its advocates as a most excellent material for the purpose used. Quite a variety of these materials still have their advocates among the most eminent surgeons of the world. One uses silk exclusively and buries it anywhere and everywhere and gives excellent reasons for not using any of the other materials. Another uses a combination of buried sutures of silk and silver wire, while another surgeon of equal eminence uses catgut for all sutures and ligatures, both buried and externally, and so on, each using the material that he believes to be the best, and as they all claim good results there is doubtless virtue in the most of these materials when properly used. However, the fact remains that non-absorbable materials, when left within the tissues often give rise to local irritations by their presence, and in many instances cause much pain and discomfort to their possessors, even if they have been aseptically placed and do not at last—as is often the case with the septic suture—come to the surface by ulceration or as a part of the contents of abscess formation. Knots of silk, silkworm-gut, silver wire, and similiar non-absorbable materials, left in the tissues remain a constant menace to the comfort and health of the individual retaining them. Very few surgeons of large practice but who can recall many of these cases of post-operative troubles—generally called *neuralgia of the stump*—that have tried patience and skill to the utmost. To avoid using such materials with their concomitant disadvantages and to obtain one that would serve every useful purpose that a good ligature and suture should, and yet disappear when its usefulness was past, many experiments have been tried which have resulted in determining that dead, aseptic, animal material, when buried in the tissues of a living animal, will become entirely absorbed, the length of time for its disappearance varying with the nature of the material and its previous preparation, and also somewhat with the age of the animal, and consequent vitality of the tissues in which it is placed.

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*Read before the Michigan State Medical Society, at Bay City, June 6, 1895.

The use of animal material for the ligation of blood-vessels was known even to the ancients, but the use of the material for this and other purposes where it might be buried in living tissue never became popular, owing to the fact that closed wounds usually gave bad results from the fermentation which took place in them. For this reason it was quite the fashion to treat all wounds by the open method, which was tedious but the safest for the patient, as the layer of granulations which soon formed acted as a safe barrier against invading germs.

The discoveries of LISTER opened the way for making the use of the buried animal ligature and suture a safe procedure. Successful experiments are, however, on record of the use of a variety of materials by a number of surgeons at an even earlier date. PROFESSOR PHYSICK, of the University of Pennsylvania, was probably the first to introduce the animal ligature into practice. He used chamois leather and rolled the strands on a marble slab to make them round; DOCTOR HARTSHORN used strips of parchment for ligatures; DOCTOR JAMISON, of Baltimore, used buckskin ligatures for a number of years, and DOCTOR EPHRIAM MCDOWELL tied the pedicle of his first case of ovariotomy with a buckskin ligature. PROFESSOR PAUL EVE, of Nashville, Tennessee, wrote, in 1876: "I have been in the habit of using the sinews of the deer for ligating vessels for forty years. I have never used carbolized spray. The tendons of the deer, dried and torn into shreds and rolled into ligatures, are what I employ. They are absorbed. I have occasionally used them as sutures, but generally apply silk for this purpose." These are but a few examples of many that tend to show that surgeons have probably, from the time of the application of the first ligature to a bleeding vessel, been aiming to use such material for the purpose as shall become absorbed and cease to act as a foreign substance in the tissues, after the object for which it was applied has been attained. Catgut was used in these early times by many surgeons, but the nature of its preparation rendered it often septic, and the bad results occurring therefrom doubtless led to that general search for other efficient and less dangerous material. Catgut, even now with our knowledge of microbic life and germ fermentation, is often found to be septic by reason of incomplete sterilization in its preparation. Any animal material is liable to be dangerous because of the same reasons, but to a degree that is infinitely less than that of catgut, as the latter material is made especially septic in its primary preparation because of the process of maceration and partial decomposition that it is then put through. The germs that are propagated at this stage of its preparation must all be destroyed at a later time by some other process, or the use of the gut will be attended with disaster. This danger does not attend the preparation of ligatures and sutures made from other animal material, as their primary preparation is cleaner and less complicated, usually consisting in simply drying the tendons, strips of fascia, et cetera, immediately on their removal from the bodies of healthy animals. This renders subsequent treatment preparatory to surgical use a comparatively simple matter, as any germs that they may harbor are not rolled up inside of them, as is the case with the catgut, but will lie on the outside of the strand, and are easily attacked and destroyed by the germicidal agencies used. The chromicized catgut as usually prepared and preserved in carbolized oil has been found to be unreliable, the large strands almost invariably containing bacteria. Catgut prepared according to a method of DOCTOR REVERDIN, of Geneva, Switzerland, has given the best results in this respect. He first takes crude catgut and subjects it for four days to a constantly increasing temperature, maximum 140° centigrade, then places it in oil of juniper for one day and preserves it in alcohol until used. The trouble with catgut prepared in this way is that it is not sufficiently hardened, and often becomes absorbed so rapidly as to destroy its tensile strength before its office has been accomplished. This defect is not of importance in its use as a ligature, as the time of compression required to control hemorrhage is comparatively short, but when used as a suture it often allows the wound to be torn open before firm union has been established. The gut may be sufficiently hardened with chromic acid to obviate this objection to its use. I know a number of surgeons who use catgut quite extensively, both as a buried ligature and suture, but as far as I know, each surgeon prepares his own material, as he believes that it is only in this way that he can be sure of the aseptic condition of the gut.

DOCTOR MARCY, of Boston, has rendered the profession a great service by urging upon their notice from time to time for a number of years, the usefulness of the buried animal suture and ligature, and the especial adaptability of the tendons of the tail of the kangaroo for the purpose. This material was doubtless used by a few surgeons prior to DOCTOR MARCY's use of it, but to him certainly lies the credit of introducing it generally to the profession. He has written a number of articles on the subject, one of which, containing a very complete résumé of the subject, was read at the meeting of the American Association of Obstetricians and Gynecologists in 1889, and first served to draw my attention especially to the subject, and from which I have secured some of the data for this article. The tendons as taken from the animal and dried, are of varying lengths, averaging about fourteen inches, but occasional pieces being as much as two feet in length. They vary in diameter from the size of the finest silk to that which is too thick for surgical use. The tendons are removed from the animal and dried in the sun and sent to this country in this condition. The strands not being round but somewhat flat in form renders the tying of them quite safe from slipping, and the ultimate fibres of construction of the tendon running parallel to its length, causes it to be very firm and inelastic. It is quite easy to subdivide each strand, after maceration in warm water, but this should not be done, as it results in making the material rough and less compact in structure. Until quite recently DOCTOR MARCY has received and prepared all of this material that has been used in this country, that I am aware of, and it has been with the material prepared by him that I have had the greater part of my experience, but during the last four months, having obtained some of the crude tendons through H. J. MILBURN & COMPANY, of Detroit, who at my request, succeeded in importing some direct from Australia, I have used only the material prepared by myself. I prepare it by first boiling in alcohol for one hour, then I use the method recommended by SIR JOSEPH LISTER for the preparation of chromicized catgut, his directions for which I will quote in full: "Dissolve one part of chromic acid in four thousand parts of distilled water, and add to the solution two hundred parts of pure carbolic acid, or absolute phenol. In other words, I use a one-to-twenty watery solution of carbolic acid, only that the carbolic acid is dissolved not in pure water, but in an exceedingly dilute solution of chromic acid. But minute as is the quantity of the chromic acid, it exerts, when in conjunction with carbolic acid, a most wonderful effect upon the gut. The first effect of the addition of the carbolic acid to the chromic solution is to change its pale yellow color to a rich golden tint. But if the liquid is allowed to stand without the introduction of the catgut, it changes in the course of a few hours to a dingy reddish-brown, and a considerable amount of gray precipitate is formed. If, however, catgut about equal in weight to the carbolic acid is added as soon as the ingredients are mixed, the liquid retains its brightness, and the only change observed is a gradual diminution of the depth of the yellow color; the precipitate, which I presume still occurs, taking place in the substance of the catgut. As soon, therefore, as the preparing liquid has been made, catgut equal in weight to the phenol is introduced into it. If you have too large a proportion of catgut, it will not be sufficiently prepared; if you have too small a quantity, it may run the risk of being overprepared. At the end of forty-eight hours catgut steeped in such a solution is sufficiently prepared. It is then taken out of the solution and dried and when dry is placed in a one-to-five carbolic oil. It is then fit for use."

When it is desirable to make the material extra hard it can be accomplished by increasing the chromic acid to double the quantity and allowing the tendons to soak in the solution for a day or two longer. Care should be observed not to use too much chromic acid, as it is possible to make the tendons brittle by too strong treatment. For closing wounds in the peritoneum, cellular tissue and skin, tendon with very little hardening will serve the purpose, as these tissues unite and become firm rapidly, but for closing wounds in aponeurotic tissue, which requires much more time to become firmly united, the extra hardened suture is the safest, as it will be absorbed less rapidly and so insure the firm union of this structure.

My experience has been entirely with this material and has now extended over a period of about four and one-half years, during which time I have used it for both ligature and suture in fifty-seven cases of celiotomy, with and without drainage, and I have yet to see my first case of post-operative hernia where this material was employed. During the last twenty months I have used the tendon in a large number of operations for ruptured perineum, in which operation, applied in conjunction with the split-flap method of denudation—or more properly, *incision*—it has given me the most gratifying results. I have also used it in a number of cases of herniotomy and in many minor plastic operations about the female genitalia with the same satisfactory results. The greatest advantage of the application of the buried suture to the operation of perineorrhaphy is that by it the parts may be *built up* by degrees, each muscle joined to its fellow separately if desired, one side built up higher than the other if necessary to readjust the parts back to their original shape, et cetera, thus eliminating as far as possible the great element of chance that pertains to, and causes, so many failures in the use of the *en masse* suture in this operation.

The *manner* in which the buried animal suture is used is of the utmost importance. It cannot be carelessly used, but must be applied with the most strict attention to every detail of its technique. When used with this care it gives one of the most beautiful and satisfactory results in surgery, and approaches as near to the artistic and esthetic as anything in our art is ever likely to do. I wish to emphasize this point of the *proper use* of the buried animal suture. If not properly applied it were better not to use it at all. The surgeon should pass his apprenticeship in the surgical workshop, and also understand thoroughly the laws governing septic processes and the means to combat them, before operating with this material, just as the finished artist must have first perfected himself by the drudgery of the fundaments of his art before he can essay to produce a successful work in color. The picture without the apprenticeship would be a botch, and so would the operation that should be performed without due regard to the fundamental laws that govern modern aseptic surgery. A closed and sealed wound with dead animal material in it, *plus* septic infection, is obviously more dangerous to the patient, locally and generally, than a wound closed up by the old method under the same septic conditions. So, without your method of asepticism is practically and scientifically correct, you had much better stick to the old plan of the *en masse* suture.

Three requisites are absolutely necessary for correct results with the buried suture method, and they are:

(1) An aseptic suture.
(2) An aseptic wound.
(3) The wound kept aseptic until union has occurred.

The first can be attained by preparing your own suture material according to the formula given, and then keeping it safely from contamination. The second requisite can be attained only by the use of aseptic instruments, sponges, water, hands, et cetera, that come in contact with the wound. The third condition is best attained by sealing the wound with collodion, after washing with ether, but other means may be used to accomplish the same object. One important point not to be overlooked is that no avenue of communication whatever must be allowed by which germs may pass into and infect the stitches that are buried in the wound. During the first year that I used this method I did not realize the full importance of this last requisite, and the consequence was that about twenty per cent. of my cases were attended with more or less suppuration. My mistakes were two in number, and consisted in, first, not sealing the wound hermetically, and second, in placing *en masse* sutures in addition to the buried sutures. This last is a common error in the use of the buried suture, and a most dangerous one it is, for while it is present in the tissues it keeps open a track for the easy ingress of those pyogenic germs that are known to have their habitat in the epidermis. Then when they are withdrawn the end that is dragged through the tissues may carry with it and implant the germs of infection. I had several cases of this kind, where the wound was perfectly healed and healthy in every respect until after the removal of the silkworm-gut *en masse* stitches, on the tenth or twelfth day, when inflammation, followed by abscess, occurred. Some definite method of preserving the material from contamination is necessary to be observed. My plan is to roll each strand into a little coil by itself, divide and place them in two bottles of the carbolic oil, one containing the fine and one the coarse strands. When preparing for an operation the number of each kind needed is calculated as near as possible, removed from the bottles with sterilized hands and forceps unrolled, the excess of oil wiped off with a towel wet with a 1–200 bichloride solution, and then wrapped, one by one, in this towel, the course ones for ligatures in one end and the fine ones for sutures in the other. By this device the strands may be uncovered separately and not handled until ready for use, and any that are left uncovered may be returned to the bottles after the operation. If any are handled and not used during the operation they are thrown away.

In applying this ligature to a pedicle I use a method which I call double partial ligation, which consists in placing the ligatures in such a manner that the stump may be slightly nourished by a small amount of superficial circulation. With a small pedicle this is accomplished by using two ligatures, each of which transfixes the margin of the pedicle opposite the other, and tying one above and one below the other. A very thick pedicle may require several ligatures, but the same principle is here carried out, allowing each ligature to lap beyond but not come in contact with the preceding one. I believe that by this method I save my patients much of the post-operative discomfort, to say the least, that is often the result of leaving the large mass of dead tissues composing the stump for nature to dispose of by the slow process of absorption. In closing the flaps of the cervical stump, after abdominal hysterectomy, a heavy strand is used and the flaps brought evenly together with interrupted sutures, while, in closing the peritoneum over the stump a continuous suture of fine tendon is used—the finer the better, as this membrane will unite very quickly, and only needs, really, to be held in apposition but a few hours to insure the complete closure of the peritoneal cavity at this point. The incision in the parietal peritoneum is closed in the same manner, using a fine continuous suture, tying and cutting it off when the end is reached, and not passing on to the next layer with the same strand. The wound is then washed freely with a 1–5000 bichloride solution, sponged dry, and the aponeurotic sheath of the recti muscles closed by the use of a carefully selected, medium sized, strong tendon and the continuous suture used, which is tied and cut off as with the previous layer. If the opening is longer than two inches this suture should be made fast by a knot at the end of each inch, so as to guard against the possibility of a weak spot in the tendon giving way and allowing the whole incision to open. The wound is again flushed with the bichloride solution and sponged dry, when the subcutaneous fatty tissue is brought together by one or more layers of running, parallel sutures, the needle passing always deeply into the loose tissue, and only moderate traction being used. After making this suture fast, the last layer, which approximates the skin, is applied. The latter is a very important part of the operation of the closure of the wound, as it must be so placed as to be entirely buried, and yet approximate the edges of the skin accurately together. This is accomplished by catching the suture in the under layer of the skin, the needle being inserted each time parallel with the surface of the skin and opposite the exit of the last stitch. The suture when placed in this manner beneath the entire length of the cutaneous incision, and drawn upon, will close the wound accurately. The end is then made fast in the *depth of the wound*, and not passed through the skin and cut off, as some surgeons dispose of it, as by the latter measure germs may be dragged back through the skin. The wound with skin around it is then thoroughly washed with the bichloride solution, dried off and sulphuric ether poured over it. The application of the ether is necessary to prepare the surface of the skin for the collodion, which will not adhere closely if this is omitted. The collodion is then applied freely with a camel's hair pencil, and while applying a thin film of cotton is incorporated with it to give added strength. When the film of collodion has formed the bandage is applied, usually with squares of bichloride gauze and cotton laid over the collodion. The collodion may be removed in nine or ten days, the wound requiring no other attention. In cases requiring drainage the wound is closed in the same manner up to one-quarter of an inch of the drainage tubes. This space is then closed with one *en masse* silkworm-gut suture, passed through skin, fascia, muscle, and peritoneum, and in such a manner that it will not come in contact with the buried sutures. When this suture is tied and the wound sealed all communication with the track of the tube is cut off and the buried sutures will remain aseptic. With the abdominal incision treated in this manner, with perfect asepticism and technique, the union will be immediate and post-operative hernia an impossibility. Experiment has demonstrated that when incised edges of tissue are united by the buried animal suture the line of union becomes ultimately the strongest part of such tissue by reason of the fact that coincident with the absorption of the suture rapid cell proliferation takes place, and a band of living connective tissue cells replaces the line of the suture. To obtain the best results from the operation of closing the abdominal wound it is necessary that like tissue be joined to like tissue in every instance—peritoneum to peritoneum, fascia to fascia, fat to fat, and skin to skin—and not matted together in a haphazard way, as it is only by renewing the continuity of each layer by itself, and in such a manner that adhesions between the layers will not remain, that the natural and unimpeded functional action of the parts will afterwards be preserved. It is rarely necessary in this operation to touch the muscular tissue with the needle, as the rectus of one side is usually only pushed to one side and rarely cut, and even when cut or torn longitudinally, sutures are not necessary as the fibres will naturally lie together without force. If the fibres are cut across they must be closed by suture, a fine strand being used for the purpose and care taken not to cripple the muscle by sewing it to adjacent tissues.

The closure of the perineum by this suture has yielded more satisfactory results to me in restoring the pelvic floor to its normal condition than the application of any other method in my experience. It is especially adapted to TAIT's split-flap method of denudation, which I almost invariably use. In cases of incomplete rupture of the perineum its application is quite simple, a number of rows of fine tendon sutures, partly interrupted and partly continuous, are inserted, beginning at the farthest point of the dissection and approximating the opposite sides to each other, gradually, until the skin is reached, which is brought together by the same lacing stitch as before mentioned in the closure of the abdominal wound, and the operation finished by sealing with collodion in the same manner as with the abdominal incision. In cases of complete rupture of the perineum the operation by this method is complicated by the necessity of closing a notch in the mucous membrane of both rectum and vagina, on whose surfaces collodion will not adhere sufficiently to seal the seam hermetically. I get over this difficulty very satisfactorily by first closing these parts externally by the use of a very fine running catgut suture and the application of aristol to the lines of union. By the previous use of a bichloride douche in the rectum and subsequently placing there a suppository of iodoform, infection of the deep parts of the seat of operation through this channel is prevented. The buried sutures are then used in the same manner as in the cases of incomplete rupture, excepting in approximating the ends of the sphincter ani muscle, when great care is taken to find and pick up the ends of this muscle and unite them with two separate strong tendons. With all of the sutures great care is taken that they do not pass near enough to the external catgut sutures to come in contact with them, as infection might thus take place. When properly placed nature rapidly places a barrier of living tissue between the external and internal layers. The aristol adheres very closely and will usually protect the catgut from infection until its absorption occurs. The skin suture and the sealing of the raphe are the same as with the incomplete rupture.

During the last two years I have used this method in a large number of perineorrhaphies and have not had an abscess occur in one, and union has taken place in all. The nearest approach to an abscess was in one case of very bad complete rupture, in which a slight purulent discharge from the anus appeared and persisted for about three weeks after the patient began to sit up, but it did not interfere with the success of the operation in any way. I also had an accident with my first case in the breaking open of the wound during defecation, owing to the fact that I used one continuous suture for the whole operation, and it giving way in a weak spot, the whole perineum was torn open. From this case I learned the lesson of mixing the sutures, using both the interrupted and continuous. This case was evidently aseptic, as it healed promptly on reclosing it without further treatment.

In conclusion I may state, as a result of my experience, that an aseptic animal suture placed in an aseptic wound by an intelligent hand, and the wound hermetically sealed, will give the most perfect mechanical results and the most beautiful and esthetic finish of any method of surgical procedure known to me. The beginner, however, must be reminded that, like liberty, success in aseptic surgery can only be achieved by the price of *eternal vigilance.*

SHOCK.[*]

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Shock is a disturbance of the functions of the nervous system, induced suddenly by a violent stimulation made directly on the nerve centres, or indirectly through the peripheral nerves, whereby the harmony of action of the great nervous centres, more especially of the sympathetic ganglia, and through them of the various organs of the body, becomes deranged. It is essentially a depression of nerve force and bears in effect the same relation to the nervous system as syncope to the vascular.

Shock may be produced by a great variety of causes, some of a bodily, others of a mental, character; some external, others internal. It may be purely nervous, or partly nervous and party hemorrhagic. The nature and extent of the shock are greatly influenced by the state of the general health at the time of the accident, the amount of injury, the importance of the part directly assailed, and also, and in especial manner, by the idiosyncrasy of the individual. There are some persons, soldiers, for example, of the most undoubted courage who fall into

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the state of most profound prostration from the most trifling accident, and who are, as it were, completely stunned from injuries so insignificant as not to affect, in the slightest degree, ordinary persons. Such an occurrence can only be explained by a reference to idiosyncrasy and it has its counterpart in those persons who, although extremely plethoric, faint from the slightest loss of blood, or even from the mere sight of that fluid. There are other persons on the contrary whom hardly any accident, however severe, can shock. They are insensible to pain; their nervous system is obtuse; nothing affects them, either bodily or mentally; a severe blow may stun them but the impression is transient, and in a few moments they are completely restored to consciousness and power. The causes may be divided into the predisposing and exciting.

Certain conditions prior to an operation or injury tend to make the shock more severe, and may therefore be regarded as predisposing. Such are Bright's disease, hepatic and cardiac troubles, a highly nervous and hysterical temperament, enfeeblement from old age, et cetera.

Among the exciting causes may be mentioned mechanical injuries, especially if very painful, or attended with hemorrhage; or if in certain localities, for example, the abdominal viscera, testicles, or large joints; burns and scalds, especially when extensive or involving the trunk; undue exposure of the body to cold, as during a long operation; the action of some irritant poisons; the sudden emptying of an overdistended bladder, et cetera.

Powerful mental emotions, as sudden fright, grief, joy, are sometimes sufficient of themselves to produce severe and even fatal shock, but some visceral disease has generally been discovered in fatal cases from such causes. Fright, moreover, as when an injury is foreseen and expected, adds to the shock produced by mechanical injury, as seen, for example, in railway accidents, burns from the clothes taking fire, et cetera, then when the recipient is excited by the predominance of certain special and local effects.

The most severe forms of shock are those that arise from gunshot wounds and railway collisions. The severely and deeply penetrating character of the injuries in the one case, and the suddenness of their occurrence, with the terror inspired by them, in the other, explain the severity of their effect on the nervous system of the sufferer. In railway accidents death has been caused without any discoverable lesion, and not only from intense emotion, but later after some days or weeks, from gradual failure of power. The nervous system is so profoundly affected that it is unable to recover itself; one single stimulus has left upon it an overpowering impression.

Fright is perhaps the very worst of the causes of mental shock and nothing is more disastrous than the conviction that an operation will be fatal. The effect of terror, on suddenly exhausting nervous power, is well illustrated by the history of those persons, who, sentenced to be bled to death, actually died on hearing the water trickling into the basin, which they supposed to be blood issuing from their veins, after the arm had been slightly pricked, although no vessel had been opened.

On the other hand, in great excitement or intense mental preoccupation, not only shock, but even pain is not felt, at least for the time. Afterward, owing to exhaustion, reaction is usually more acute.

Loss of blood, if sudden, may of itself cause most intense shock, and in all cases is a very grave addition.

In children the element of mental emotion is much less prominent owing to their force being developmental rather than nervous or muscular, and consequently operations and injuries are better borne than by men in the prime of life, where all the organs are subservient to the exercise of nerve force. Unless there has been acute pain, great hemorrhage, or prolonged exposure to cold (all of which they stand very badly) children do not as a rule suffer from shock. Those are most liable to suffer from it whose nervous system is already in what must be called, for want of a better term, a state of depression, whether this is due to natural temperament, cold, exposure, or fatigue, loss of blood, or other accidental conditions.

The severity of a shock, when the brain or spinal cord is not injured directly, is in a great measure proportionate to the degree of pain attendant upon an injury; and as sensibility to pain varies greatly in different individuals, so will the attendant shock be greater in some than in others. Men who live hardy outdoor lives are less sensitive to pain than those who follow occupations of an opposite kind. The higher man rises in the scale of civilization, the more acute does his sensibility to pain appear to become, or possibly the less well able is he to bear it.

The symptoms of shock necessarily vary considerably. They are generally such as attend syncope from loss of blood, or concussion of the brain, which is itself only a form of nervous depression, or expenditure of the nervous forces.

There are two varieties of shock, the one characterized by extreme depression, the other, which is much the more rare, by great excitement. Upon what the difference depends, why one form should occur and not the other, is not known.

When the injury is not severe, does not implicate important parts, or occurs in an individual of strong nerve, the symptoms are slight and passive. A momentary confusion, giddiness and palor with tumultuous action of the heart and a catch in the breath may be observed. These symptoms speedily pass off and are followed by no other effect than a feeling of depression, physical and mental. In the ordinary form the patient lies in a semi-conscious state, quiet, with the eyes glazed and half closed, the limbs in the position that chance may have placed them; able to speak feebly and slowly, but entirely incapable of any mental effort. The sufferer becomes pale, cold, faint and trembling; the pulse is feeble and frequent, generally more or less irregular, perhaps hardly perceptible at the wrist, the arteries seem to collapse and empty themselves between each beat; the respiration is slow, shallow and sighting, and the temperature far below normal, falling at times to 97° or even 96°. There is marked muscular relaxation, usually yielding of the sphincters; urine, if the bladder is full at the time of the accident, is retained; but afterward, for many hours, the secretion stops almost altogether. The symptoms may gradually increase, and the patient die of syncope or asthenia; or he may gradually rally in a few hours and pass into the condition known as reaction. The pulse will then become full and increased in frequency, the temperature slightly raised, the face slightly flushed, the skin hot and dry, the urine scanty and high colored, the tongue furred, and bowels constipated. Many of the feverish symptoms, however, that were formerly regarded as the result of excessive reaction, are now known to be due to septic poisoning. In the worst cases such as are almost certain to prove fatal, there is complete absence of the sense of pain. I have seen patients dreamingly look on, without any sign of intelligence, while broken fragments of bone were being removed and search made for bleeding arteries, in crushed limbs.

The other variety, which is characterized by furious excitement, is more uncommon. Its onset is nearly always gradual; at the first there is some ground for hope, and the general condition appears not altogether unsatisfactory, although the pulse is very rapid and devoid of power. Very soon, however, the patient becomes restless and begins to talk volubly and incoherently; delirium sets in; the limbs are thrown wildly about utterly regardless of pain; and in a short time that is followed by a condition resembling furious mania. The result is invariably fatal.

On recovery from the immediate and depressing effects of shock secondary phenomena of various kinds frequently present themselves. These are chiefly such as arise from lesion of the sympathetic nervous system and consequent disturbance of its vaso-motor action. Various functional derangements of the brain and spinal cord often manifest themselves; amongst these headache, sleeplessness, diminution of mental power, and chorea are the most common. Tumultuous action of the heart, panting and dyspnea under exertion, congestion of the abdominal viscera, and in some cases hemorrhage from the intestines are also amongst the more common secondary phenomena of severe shock, and more remotely we find various thromboses. The depression of temperature consequent on severe nervous shock may last for a very great length of time, many months after the accident, according to ERICHSEN. During the whole of this period the mind and nervous system continue in a weakened state.

Reaction, after shock, is denoted by a gradual, or more or less rapid resumption of the functions of the different organs, and one of the first evidences of this change is in a return of the color of the face, with an increase of the heart's action, as indicated by the state of the pulse, which is not only stronger and fuller, but more steady and regular; the respirations are more free and open; the surface becomes warmer and dryer; the sphincters again obey the will; and the mind regains its self-possession and power of reaction. Often the first symptom of reaction, after severe shock, is vomiting followed by a complete clearance of the contents of the stomach, itself generally a favorable sign, as it often denotes a return of the muscular power.

Shock must not be confounded with the effects of concussion of the brain or with syncope. It may be associated with, and its intensity materially increased by, one or both of these conditions; but it commonly occurs independently of either. To differentiate syncope due to failure of the blood supply of the brain rarely causes difficulty; with hemorrhage, especially when it is internal, the diagnosis may be impossible at first; but in the case of a hemorrhage when reaction takes place, the palor of the gums and conjunctiva presists; in many cases of injury to the abdominal viscera it is practically impossible to make a diagnosis, the two are so often associated. Given a case of severe contusion followed by a collapse, it may be due to shock alone or to shock complicated by a hemorrhage from rupture of the viscera or tearing of a mesenteric artery or vein, and there is no certain method of separating one condition from the other. Failure of sight due to anemia of the retina, constant yawning, or deep sighing inspirations, and throwing the arms about over the head, are very suggestive of hemorrhage, but nothing more, and a great deal of blood may collect in the abdominal cavity without causing any marked degree of dullness.

There are no characteristic post-mortem appearances in fatal cases of shock. The heart rarely contracted, is more often found flacid and full of blood, especially the right side, and the whole venus system is somewhat gorged, unless the patient has lost much blood from the accident. The lungs are engorged, the abdominal viscera congested, but the brain is pale and anemic.

In the line of present investigation the pathology of this condition is obscure and doubtful, however much we may speculate and theorize.

The impression produced by the injury, operation, or mental emotion, on the nervous centres, is believed either, first, to lead to paralysis of the heart directly through the pneumogastric nerves; or, second, to induce through the splanchnics a vaso-motor paralysis of the walls of the abdominal veins, whereby they become gorged and the nerve centres and the heart in consequence imperfectly supplied with blood; hence partly owing to deficient nervous stimulus, and partly to lack of sufficient arterial blood to the heart's substance and ganglia, cardiac paralysis ensues.

It is certain, I think, that paralysis of the vaso-motor nerves, probably inhibitory, is an essential part of a shock; but it is not certain whether it is universal or local. GOLTZ showed that when a frog is struck on the abdomen, its heart ceases to beat, and at the same time the portal system is vastly distended with blood. He supposes the former phenomena to be the effect of the latter, and the two together to account for the feature of shock.

The exhaustion of the nervous centres thus induced is shown by the general state of muscle relaxation, the loss of tone throughout the vascular system, and the state of semi-unconsciousness into which the patient is thrown. The general relaxation of the vessels throughout the body thus occurring simultaneously with an extreme feeble action of the heart, leads to an accumulation of blood with partial stagnation in those parts of the vascular system which are most dilatable. This is especially marked in the veins of the abdominal cavity. The abstraction of so large a portion of the blood from the circulation causes anemia of other parts, and it is thus that the palor of the skin and the anemia of the brain have been explained.

The change is essentially a molecular one; the energy of the active tissues, especially the nerves and the muscles, suffers the most extreme depression; they are incapable of putting out any force, or of producing the amount of heat requisite to maintain the temperature of the body; the power of doing work of any kind is lost.

The prognosis depends on the amount, on the presistence, and on the attending complications of the shock. Death may result almost instantaneously, even when the prime injury is apparently trifling, as in injuries to the abdominal viscera; or it may begin more gradually and slowly become worse and worse until death ends the scene. A particular dangerous condition is that termed "prostration with excitement," in which "the languor or stupor of collapse is succeeded by restlessness, tremor, and twitching of the muscles, often but not always delirium of various degrees."

The condition of the pulse and the temperature together give the best clue (always provided that there is no hemorrhage), but a great deal depends upon the kind of injury. The maniacal form is nearly always fatal.

The treatment of shock must be conducted with two objects in view: to promote reaction, and to moderate supervening inflammation, for to prevent it altogether is by no means always possible.

In slight cases, beyond covering the patient up warmly in bed with blankets, and applying hot bottles to the feet, nothing is required except when there is much pain a hypodermic injection of morphia.

In severe cases the patient should immediately be placed recumbently, and the injured part arranged as comfortable as possible; all constrictions should be removed, and free access of cold air should be provided. Warmth is the first essential, warm affusion to head, hot blankets round the patient, and hot water bottles outside these, with friction to the hands and surface.

Stimulants are usually required, small quantities oft repeated; as the pulse improves the intervals can be lengthened so as not to subsequently induce excessive reaction. If deglutition is practicable brandy and water should be given, but do not try to pour liquid down a patient unable to swallow, lest it find its way into the larynx. In these circumstances ammonia should be applied to the nostrils, and a stimulating enema administered, or ten minims of ether may be given hypodermically and repeated at intervals of about ten minutes if necessary until the patient begins to rally. Morphia is beneficial, relieving the pain and so diminishing one cause of the depression. Strychnia, atropia, amyl nitrate and nitro-glycerine have each many advocates. Strychnia is perhaps a little slower in showing itself than the others mentioned, but it is more lasting. It increases the force of the pulse by direct stimulation of the heart muscles and its ganglia, while the rise of arterial pressure which it causes, is due to stimulation of the vaso-motor center.

Transfusion is of very little use in shock uncomplicated with hemorrhage. A certain amount of benefit may be derived from raising the limbs and bandaging them so as to diminish as far as possible the area over which the blood in the body has to be distributed.

Occasionally reaction is sadly interfered with by an overloaded stomach as when the accident occurs soon after a hearty meal. The indication obviously is to assist nature in her efforts at emesis, by the administration of alum, ipecac, zinc sulphate, et cetera.

Hemorrhage must of course be stopped at once. Crushed limbs rarely bleed from the large vessels, but often there is a considerable amount of general oozing, which is serious in such a condition. Very hot bichloride, and afterwards firm bandaging, is the most satisfactory. Where a mass of muscle projects from the end of a crushed stump and persists in oozing, it may be ligatured and cut away. If there has been severe hemorrhage, fluid nourishment in small and oft-repeated doses should be administered with the stimulant.

If there has been excessive hemorrhage, infusion of saline solution should be performed, the extremities in the meantime being raised and bandaged so as to impel as much blood as possible to the nerve centres and imperfectly distended heart. Electricity has in some cases been useful.

Remember that collapse in some cases of internal hemorrhage is useful, by giving time for nature to close the bleeding vessels. In such cases the treatment had better be limited to horizontal posture, strict quiet, external warmth, and such action as the bleeding may demand. When reaction has commenced, food must be given, for example, small quantities frequently repeated, of brandy and egg mixture, milk and strong soup.

The second indication is to moderate the resulting inflammation. To do this much may be accomplished in the way of prevention by letting on the reaction gradually, avoiding, on one hand, the undue use of stimulants, and on the other, cautiously interposing antiphlogistics as occasion may rise for their exhibition. As the secretions are commonly materially deranged in all cases of severe shock, early and effectual means should be adopted for their correction and improvement; a gentle mercurial purge will often admirably fulfill the indication. The diet of the first few days should consist mainly of animal broths, et cetera, and cautiously followed by food of a solid and more substantial character.

Anodynes are always borne well. After a severe shock has entirely passed away, we must adopt means to prevent the remote consequences. With this in view, complete rest of body and repose of mind must be enjoined. All business must be laid aside, the patient's diet and habits of life should be carefully regulated—overstimulation being especially avoided, bowels kept freely open, and his general health attended to on ordinary medical principles.

A question of considerable importance occurs in these cases, namely: whether an operation should be performed during the continuance of the shock. I think it depends entirely upon the kind and extent of the injury. So far as primary amputations are concerned, I think the best course to pursue is to stop the hemorrhage, prevent decomposition by wrapping up the limb in a strong solution of bichloride of mercury (1–500) and leave it, not until reaction is beginning, but until it has thoroughly set in, as the additional injury inflicted by the operation would increase the depression under which the patient is suffering. In some cases, however, the presence of a crushed limb appears to prolong the shock, and prevent the patient from rallying, notwithstanding the administration of stimulants; and again, it is necessary to perform the operation at once, such as opening the abdomen for the arrest of hemorrhage. In these circumstances the surgeon would be justified in operating before reaction comes on. Here the administration of ether is extremely beneficial; it exercises a sustaining influence, not only by acting as a stimulant to the nervous system, but by preventing the pain and dread of the operation from still further depressing the vital energies.

ECTOPIC PREGNANCY.*

By HUGH McCOLL, M. D., Lapeer, Michigan.

For all practical purposes all cases of ectopic pregnancy may be considered as primarily tubal. Other forms of ectopic pregnancy may possibly exist as primary conditions, but if so they are very rare. Interstitial pregnancy, including as it does a part of the tube, is classed as tubal. Tubal pregnancy usually continues as such from six to thirteen weeks when, by distention, rupture takes place in one of two directions: into the peritoneal cavity forming intraperitoneal hematocele, or between the folds of the broad ligaments forming extraperitoneal hematocele. In either case the placenta may take on new attachments and the fetus may continue to develop and grow in its new position to full term or until placental separation causes another hemorrhage.

* Read before the Michigan State Medical Society, at Bay City, on June 6, 1895.

Until recently not many cases of ectopic pregnancy were diagnosed as such until rupture had taken place, and even now the condition is not recognized as often as it ought to be until rupture of the tube with its accompanying shock is encountered. Many cases do not come under the observation of the physician in the early stages, and sometimes when they do the symptoms presented are not always such as to enable even expert diagnosticians to make a correct diagnosis of the case.

I have seen but two cases of unruptured tubal pregnancies operated upon and and in neither case was a diagnosis of pregnancy made until the abdomen had been opened. In many cases, however, a careful study of the history and symptoms will enable the physician to make a correct diagnosis. It is essential that the physician should make a correct diagnosis when rupture takes place, for then the life of the patient depends upon the course of treatment followed. All cases of tubal pregnancy, where the diagnosis has been made before rupture, should be operated upon at once. If there is uncertainty as to whether pregnancy or some other tubal disease exists the operation should be done.

When rupture into the peritoneal cavity takes place the operation should be done as soon as the patient recovers from the immediate shock.

When rupture takes place between the folds of the broad ligaments, forming an extraperitoneal hematocele, the urgency for operation is less and in most cases no operative interference is necessary primarily, and in but a small number secondarily, as a result of suppuration or recurrent hemorrhage. I know that a number of able and expert operators advocate operation in every case, claiming that many cases diagnosed as extraperitoneal are intraperitoneal. In this connection I report briefly the histories of four cases recently encountered. The first two are cases of extraperitoneal rupture.

Case I.—Mrs. B., aged forty; mother of five children; youngest five years old. She had missed one menstrual period and was approaching the time for the second when she had an attack of uterine pain followed by a gush of blood, after which the pain ceased. Two days later while standing on a chair fixing a window-curtain she had another attack with several gushes of blood from the vagina, which recurred at intervals for three days and then ceased. Two days later while in bed she was seized with intense pain in the left side of the pelvis and became very faint. I saw her a few hours later and found a large mass filling the left side of the pelvis but circumscribed, the uterus was pushed to the right side and the cervix rested under the arch of the pubes. She complained of rectal smarting and tenesmus. Upon introducing my finger into the rectum a constriction was encountered through which my finger passed with difficulty, the blood evidently dissecting up the peritoneum and pressing on the rectum, as described so graphically by TAIT. I did not consider operative interference necessary. She made a complete recovery and in three months was as well as before the rupture.

Case II.—Mrs. H., aged twenty-two; married one year. She had a history of gonorrhea shortly after marriage. Having missed two menstrual periods she considered herself pregnant. At the tenth week she had a bloody discharge from the vagina which recurred every two or three days, sometimes with pain. A few shreds of membrane had been noticed. One week after the first discharge she was seized with intense pain and shock. Her doctor was called and thought she was having an abortion. The pelvis was filled with a globular smooth mass. The uterus was pushed up so high that it was with difficulty the cervix could be reached behind the pubic arch. The conditions were such that he thought best to call a consultant, which he did next day, but the consultant felt certain that it was not a case of abortion, and as neither of them had, in a very long experience, met with such a case I was sent for. I found the pelvis full. The cervix could be reached with difficulty. A smooth surface rounded up above the pubes almost like a large soft fibroid. There was no evidence of hemorrhage into the peritoneal cavity. On rectal examination, the same condition of constriction existed as in the previous case. The pain was referred to the *right* side. Here, then, was a case of pelvic hematocele lifting up the peritoneum from the whole pelvic floor, forming a dome above. She had rallied well from the shock and as there was no urgency for operative interference I had her watched carefully. She had no increase of temperature and ultimately made a complete recovery. There was for a year a small lump on the right side, but that has entirely disappeared.

This was the largest case of extraperitoneal hematocele that I have seen. I have seen many other cases of much smaller and more limited hematocele, some of which have passed on to suppuration which I have opened into the vagina. I have witnessed two cases of extraperitoneal hematocele of pregnancy operated upon; one by abdominal section, opening the pelvic peritoneum, and after stitching to the parietal peritoneum, turning out the blood clots and draining; the other by vaginal incision, packing with iodoform gauze. The recovery of these cases to ultimate health was not more rapid than those not operated on.

Case III.—Mrs. M., aged twenty-five; married five years. She had not been pregnant and considered herself very well since her marriage. Six weeks before I saw her she had missed her menstrual period and for a few days was more or less nauseated, but that passed off and she regained her usual healthy condition. At the time of the next menstrual period she had a slight show for one day. No pain nor discomfort of any kind. Two weeks later she was seized with intense pain and shock. A physician was called in who administered stimulants and morphine. I saw her next day, and as her docter suspected, I found intraperitoneal rupture caused by ectopic pregnancy. She had rallied fairly well and willingly submitted to operation. A large amount of blood was found in the pelvis and the membranes hanging in a rent in the left tube. I did not find the fetus in this case. She made an uneventful recovery.

Case IV.—Mrs. O. L., about thirty-five years of age; mother of three children, the youngest four years. A slight endometritis had existed since the birth of her last child. The menses were regular until three months ago when they ceased, and for eight weeks she had the usual signs of pregnancy. At that time she was taken with a severe pain of a cutting or griping character with faintness, but was relieved by a few doses of morphine. She noticed a marked increase in the size of the abdomen shortly after. The history was not clearly ascertained for the next four weeks, but at the end of that time she was taken with severe pain and intense shock. Her physician being sick, DOCTOR E. D. GARDNER was called in to take charge of the case. The next day I saw her and found the abdomen as large as that of a woman at seventh month of pregnancy, and the pelvis filled with a boggy mass. As she was still suffering intensely with shock and almost pulseless operation was deferred until next day, when, having rallied somewhat, I operated. I found the abdomen filled, with great blood clots adherent to the coils of the intestines, which were with difficulty separated from them. I found a fetus of about three months among the clots in the pelvis, with a placenta almost entirely separated, and incorporated with it and almost like a part of it, three layers of blood clot of different ages. I washed out the abdomen rapidly with sterilized water and as there was some considerable oozing from the seat of placenta I packed with iodoform gauze after removing the left tube which was ragged, having been the original seat of the pregnancy. It was evident that the rupture had taken place four weeks previously and that placental attachment had taken root in the pelvis and was followed by subsequent separation. I was glad to get the patient alive off the table. She rallied slowly, but succumbed to sepsis after twelve days. This exemplifies the danger of delay in operating after the first intraperitoneal rupture.

TRANSACTIONS.

GRAND RAPIDS ACADEMY OF MEDICINE.

STATED MEETING, APRIL 29, 1895.

THE PRESIDENT, SAMUEL P. WOOSTER, M. D., IN THE CHAIR.
REPORTED BY LOUIS A. ROLLER, M. D., SECRETARY, *pro tempore.*

DISCUSSION OF PAPERS.

DOCTOR EUGENE BOISE read a paper on "Backward Displacements of the Uterus," the following being an abstract thereof:

In order to understand the methods of repair of these displacements, it will be necessary to review hastily some points in the anatomy of the parts.

The uterus lies, normally, in a state of marked anteversion, being nearly at right angles to the axis of the body. It is held in this position by various forces —the broad, round, utero-sacral and utero-vesical ligaments, the vagina and perivaginal tissue, and finally the force of intraabdominal pressure.

Relaxation or overstretching of the round ligaments without any variation in the length or force of the other supports, results in retroflexion of the organ. Retroversion presupposes overstretching of both the round and utero-sacral ligaments. No method of repair will be perfect that does not take account of the abnormal condition of both sets of ligaments.

That method which most nearly restores the parts to their normal anatomical condition is the method most nearly correct.

The method advocated by SAENGER, BYFORD and HERRICK, of shortening the utero-sacral ligaments, alone, is faulty in that it leaves the upper part of the uterus unnaturally movable.

The ALEXANDER operation is faulty in that it leaves the lower part of the uterus too movable.

A combination of the two is the ideal method. When the uterus is bound down by adhesions, the abdomen must be opened and the adhesions forcibly separated.

All other methods, such as massage, elastic pressure by tampons, and SHULTZE's method are faulty and unreliable.

After the abdomen has been opened and the adhesions separated, prolapsed ovaries should be stitched to the upper border of the broad ligaments.

It has been and still is the custom of the majority of operators to remedy the displacement by some form of ventro-fixation. But this is unsatisfactory. This has been recognized, and attempts to hold the uterus in its normal position by some form of shortening (intraabdominal) of the round ligaments, have been made. It was found that folding in the ligaments of the fundus of the uterus threw it too far backward.

DOCTOR MANN's method, recently proposed, of folding the round (and broad) ligaments on themselves is faulty in that it causes too acute flexion of the vessels, nerves and lymphatics of the broad ligaments.

It seems to me that the most rational way, and the way nearest to nature, is first to open the abdomen, separate the adhesions, restore the ovaries to normal condition and position as nearly as possible and then secure permanent restoration of the uterus to its normal position by shortening both the utero-sacral and round ligaments—the former through the vagina, and the latter by opening the inguinal canals and making the modified ALEXANDER's operation.

DOCTOR O. E. HERRICK: I think that DOCTOR BOISE has thoroughly covered the ground. A displaced uterus with metritis and subinvolution can never be kept in position until that condition has been relieved. I get just as good results in subinvolution from the use of the alum-ferric plug as from curetting. Pessaries I seldom use, and think they often do harm, but when used should be carefully watched. Congenital flexions I let alone unless they are very troublesome, then I dilate. Many cases disappear after marriage. Another class of cases can be materially benefited by the use of the intrauterine stem which should be short and used with care. There are different operations in vogue for the cure of backward displacement of the uterus. Ventro-fixation I have done twice. The operation of shortening the round ligaments is not done so frequently now. The ligaments elongate during pregnancy and shorten after pregnancy. I have done this operation but twice and must say I am not highly pleased with it. The points of adhesion seem to cause pain in stooping over. In my opinion the ideal operation for holding the uterus in place is not yet discovered. In lieu of a pessary, I prefer the vaginal tampon until the ligaments have regained their tone.

DOCTOR PETERSON: All subinvoluted conditions of the uterus should be removed before any attempt is made to restore it to its normal position. When the ovaries are not prolapsed, and there are no adhesions, ALEXANDER's operation is indicated. In the cases in which I have done ALEXANDER's operation the results have been good. The pessary, as an instrument for general use, is not good. It requires experience and skill to properly fit one. In KELLEY's operation the fundus is not fixed to the abdominal wall but is suspended by the ovarian ligaments and is freely movable. You will not get adhesions, and I do not think abortions are any more liable to occur. I think the intrauterine stem is contraindicated in all diseased conditions of the uterus. I recently examined ten cases in which I had done KELLEY's operation and found the cervix well back and the fundus forward. I also examined them standing and the position of the uterus remained unchanged.

DOCTOR EMMA N. WANTY: There is another way of curing many of these cases of malposition of the uterus, namely, nature's way of pregnancy and careful attention afterward on the part of the physician. I have in mind a case that had been operated upon without benefit and which was afterward cured by pregnancy.

DOCTOR WATSON: The paper of the evening which has been so well presented by DOCTOR BOISE, relates principally to operations for the cure of malpositions of the uterus. I do not think the general practitioner can enter the abdominal cavity to correct these difficulties. I think the patients should be taught to be patient and to place her entire confidence in her physician. I have never seen a case of retroversion or retroflexion of the uterus that I could not benefit by the use of a properly applied pessary. I cannot treat such cases without pessaries, and I do not approve of opening the abdomen to cure malpositions of the uterus.

DOCTOR BOISE: In regard to pessaries, they are good in some ways but they are not *curative* agents. My paper relates to the *cure* of these cases. Pessaries may do good temporarily and when they do I believe it is owing to the irritation and adhesions produced behind the cervix. They cannot be used in many cases for the uterus is inflamed and sensitive. Every one should not open the abdominal cavity, but if one is thoroughly competent there is not much danger. Pregnancy does good in some cases if you have charge of your patient before and after confinement.

CORRESPONDENCE.

NOTE ON THE HISTORY OF PERINEORRHAPHY.

TO THE EDITOR OF The Physician and Surgeon: I was not present at the meeting of the Detroit Medical and Library Association when DOCTOR H. W. LONGYEAR, of this city, read his very excellent paper on "Traumatisms of the Parturient Canal," but I had the pleasure of reading it in the March number of your journal, from which I quote the following: "VELPEAU was the first surgeon to practice the operation for restoration of the ruptured perineum." SKENE, in his work on the diseases of women, makes a similar statement. Other writers upon the subject have also given VELPEAU the credit of originating the operation for restoration of the perineum.

It may not be of much practical importance, to a surgeon or his patients, who devised a surgical operation, but if one attempts to relate history, his statements should be verified by facts, that credit may be awarded to whom it is due. The operation was made and described two hundred years before VELPEAU made it. AMBROISE PARÉ, born 1509, died 1590, was the first to suggest the operation of perineorrhaphy, but gives no definite description of his method of procedure more than to describe a simple stitching up of the perineum at the time of rupture, and even of this he says that it is "*un grand desastre a la pauvre femme*" on account of the cicatrices, which render it necessary, if the woman becomes pregnant again, to cut the perineum when she is delivered, lest it be torn, as he adds he himself has done twice "*en cette ville de Paris.*" His pupil and successor, JACQUES GUILLEMEAU, was really the first to describe the various steps of the operation, and reports a successful case. In his work, published in Paris in 1612, which lies before me as I write this article, is his description of the surgical procedure in quaint and abbreviated French and is substantially as follows: The recto-vaginal septum having been torn through, he waited until six weeks after delivery when, with a sharp, curved bistoury he denuded, first one side, and then the other, cutting through the cicatrix and skin. He then transfixed the two parts through the recto-vaginal septum with long needles, in a manner similar to the operation, as he distinctly states, for hairlip, and, as in that operation, wound the ends of the needles with silk in a figure eight, and lastly put in superficial sutures. VELPEAU, one of the most distinguished surgeons of this century, who practiced from the time of his graduation in 1825 until the close of his useful life in 1867, was doubtless instrumental in reviving this operation, which seems, so far as medical history is concerned, up to his time, to have been an infrequent operation.

EDWARD W. JENKS, M. D.

DETROIT, July 23, 1895.

EDITORIAL ARTICLES.

THOMAS HENRY HUXLEY.

AN eminent scientist and naturalist has recently been summoned to that bourne from whence no traveler returns. PROFESSOR THOMAS HENRY HUXLEY died at Eastbourne, England, on June 29, aged seventy years. In the demise of this distinguished personage science loses a foremost exponent, and society an interesting character.

The deceased was born at Ealing, Middlesex, England, in 1825, and received his early education in the schools of his native town. When seventeen years of age he entered the Charing Cross Medical School, from which he graduated a Bachelor of Medicine three years later, winning high honors in physiology, a specialty in which he afterward manifested such clever proficiency that the sobriquet of "philosophical biologist" was applied to him.

Entering the naval service in 1846 he accompanied CAPTAIN STANLEY'S expedition to the Eastern Archipelago, during which voyage he devoted much attention to the natural history of the sea. In 1853 he returned to London and was appointed professor of Paleontology in the Royal School of Mines. Later he occupied the chair of Physiology in the Royal Institution, and performed the duties of examiner in Physiology and Comparative Anatomy in the University of London. The position of Croonian lecturer to the Royal Society was assumed by him in 1858, and in 1863 he was called to the chair of Comparative Anatomy in the Royal College of Surgeons, a professorship which he held for seven years. He accepted the Lord Rectorship of Aberdeen University in 1872, and the Secretaryship of the Royal Society in 1873. The position of Inspector General of Fisheries becoming vacant in 1881 he was appointed to that office, and in 1884 he was honored by election to the Presidency of the Royal Society. He enjoyed a membership in the principle scientific societies of the world, and had received honors and decorations galore. The degrees which he had the honor of having conferred upon him were F. R. S., LL. D., Ph. D., D. C. L., and M. D.

While studying medicine at the Charing Cross Hospital HUXLEY began doing literary work, and it can be truthfully said that his contributions to science have had the salutary effect of popularizing the knowledge acquired in that inviting domain. Among the productions of his pen may be mentioned: "Oceanic Hydrozoa," "Man's Place in Nature," "Lessons on Comparative Anatomy," "Lessons in Elementary Physiology," "An Introduction to the Classification of Animals," "Lay Sermons, Addresses and Reviews," "Manual of the Anatomy of Vertebrated Animals," "Critiques and Addresses," "Origin of Species," "More Criticism on Darwin and Administrative Nihilism," "American Addresses," "Physiography," "The Crayfish," "Science and Culture," and the "Advance of Science in the Last Half Century."

Although author of numerous works, still no autobiography recounts his virtues. Notwithstanding the failure to bequeath this legacy to the world, the nobility of Huxley's character is indelibly portrayed in the following beautiful sketch which adorns his writings: "That man has a liberal education who has been so trained in youth that his body is the ready servant of his will and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold-logic engine, with all its parts of equal strength and in smooth working order, ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of Nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to halt by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of Nature or of art, to hate all vileness, and to respect others as himself. Such a one, and no other, has had a liberal education."

EDITORIAL BREVITIES.

SIXTEEN THOUSAND TEACHERS OF SANITARY SCIENCE.

In enacting a law providing that sanitary science be taught in our public schools the last legislature performed a deed worthy of general commendation. The statute prescribes that this instruction shall be imparted under the direction of the State Board of Health, and sufficient guaranty is thereby given that the fundamental principles of sanitation will be well grounded in the pupils, provided that teachers respect the law. At the recent quarterly meeting of the State Board of Health measures were inaugurated for complying with this mandate, which becomes effective on August 30. The secretary, Doctor Henry B. Baker, submitted a four-page leaflet containing the information contemplated by the act, and school boards will be supplied with copies of this for distribution among superintendents and teachers. There are about sixteen thousand teachers employed in Michigan, and under the new régime they will be required to discourse upon the best methods for restricting and preventing the dangerous communicable diseases. This procedure will have the effect of establishing direct communication between the schools and the central health office at Lansing, and through the medium of pedagogue and pupil the State Board of Health will be enabled to reach, indirectly, the people of the whole state, thus increasing its efficiency as a sanitary body.

THE STATUS OF SERUM-THERAPY.

Reports from various quarters recount different experiences with immunized serum. Doctor Donald, of Detroit, has prepared a paper detailing the results of a series of experiments with the serum of erysipelas in the treatment of malignant growths. It was administered hypodermically in both sarcoma and carcinoma, and notwithstanding some of the patients expressed relief, and even asked for more frequent injections, still the doctor is not convinced of the ultimate efficacy of this new therapeutic agent, circumstances having developed which prevented a continuance of the test. The paper will be published in an early issue of *The Physician and Surgeon*. DOCTOR EMMERICH, of Germany, has also been employing serum-therapy, and reports several cases of cancer favorably affected by this treatment. DOCTOR SCHOLL, another German therapeutist, likewise announces beneficial results from the administration of immunized serum. The glory attending the success claimed by these two gentlemen suffered depreciation a fortnight later by DOCTOR BRUNS denying the alleged improvement in their patients. Cases of osteo-sarcoma of the leg and breast have been reported favorably treated with serum by DOCTORS RICHET and HERICOURT. Tuberculosis and syphilis figure among the maladies that have been subjected to this medicament. DOCTOR PAQUIN, of Saint Louis, reports twenty-two cases of the former disease which were more or less improved by serum from the horse. In the realm of specific disease DOCTOR RICHERT reports a case of multiple ulcerating gummata of three years' standing cured in fourteen days by serum from the immunized donkey. DOCTORS FOURNIER and GILBERT have been dabbling in the treatment of syphilis by serum-therapy, but have not yet achieved notable degree of success.

WOMEN AND THE WHEEL.

FOR the purpose of obtaining reliable data in regard to the effects of bicycling upon women DOCTOR TOWNSEND has been propounding a series of questions to women physicians in Boston and vicinity. Although the replies were not sufficiently numerous to settle the matter beyond peradventure, nevertheless the consensus of opinion among those who heeded the interrogation sustains the temperate employment of the wheel. Out of eighteen answers to the inquiries seventeen writers declared their firm belief in the value of bicycling when moderately indulged in. One-half of the physicians responding had witnessed no untoward results from the practice. The remaining contingent had noted various minor disorders attributable to immoderate exercise. Record is made of ovarian trouble supposed to have been induced by riding long distances at about the menstrual epoch. Other ailments observed were inflammation of the ovary with anteflexion, renal hemorrhage, uterine hemorrhage, and miscarriage. Sixteen of the physicians advised bicycling in some forms of uterine disease. Retroversions are generally corrected, and the condition of prolapsed and enlarged uteri are materially improved.

MEDICAL NEWS.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

THE arrangements for the twenty-first annual meeting of this association are about complete. In response to the general invitation sent out in May, many letters are being received daily by the secretary. These letters are largely acceptances, and the outlook for the Detroit meeting in September is indeed bright. A number of excellent papers have already been received, and the scientific treat in store for those attending the meeting will amply repay them for the trip. The profession of Detroit promise a most delightful week socially; the ladies are especially urged to attend the meeting and by their presence add to the enjoyment of the social pleasures. There is no more delightful season in which to visit the picturesque City of the Straits than the late summer. Located within a short distance are many beautiful river and lake resorts, making it possible to arrange some very pleasant side trips. Lay aside your professional burdens during the first week in September, come, with your family, to Detroit, enjoy the intellectual feast during each day, and in the evening hours partake of the bountiful hospitality which the profession and good citizens of the city will extend to you.

THE NU SIGMA NU SOCIETY.

The thirteenth biennial meeting of this organization was held at Minneapolis, on June 3, 4, and 5, the address of welcome being delivered by Doctor George A. Hendricks, professor of anatomy in the University of Minnesota. Delegates were present from New York, Chicago, Cincinnati, Detroit, Pittsburgh, Minneapolis, and Jackson and Ann Arbor, Michigan. The program comprised one session each day, a surgical clinic by Doctor C. A. Wheaton, of Saint Paul, a general reception to visiting delegates, a jaunt to Lake Minnetonka, and a banquet tendered by the Epsilon Chapter. The toasts and speakers were as follows: Nu Sigma Nu, Doctor John L. Irwin, of Detroit; Charter Members, Doctor W. J. Mayo, of Rochester, Minnesota; Initiates, Doctor A. J. Gillette, of Saint Paul; Our Future, Doctor F. W. Main, of Jackson, Michigan; Our Profession, Doctor J. E. Moore, of Minneapolis; The Successful Practitioner, Doctor J. F. Fulton, of Saint Paul; Wanderings, Doctor M. P. Vander Horck, of Minneapolis; Alumni, Doctor C. A. Erdman, of Minneapolis; Reveries, Doctor F. O. Dunsmoor, of Minneapolis. The following were elected officers for the ensuing year: President, Doctor John L. Irwin, of Detroit; vice-president, Doctor James T. Christison, of Saint Paul; secretary, Doctor W. J. Lyster, of Detroit; treasurer, Doctor J. F. Hasbrouck, of New York; historian, Doctor F. G. Stubbs, of Chicago; guard, Doctor Lawrence Shields, of Cincinnati. The next meeting will convene in New York City.

THE OUTPUT OF MICHIGAN MEDICAL COLLEGES.

Following is the list of graduates from the four medical colleges in Michigan for the current year:

The Detroit College of Medicine.—J. C. Anderson, W. H. Baldwin, C. W. Barrett, G. C. Bassett, R. W. Bates, A. F. Beneteau, W. G. Bird, J. H. Brennan, F. S. Broderick, J. L. Chipman, G. J. Colborne, W. A. Coleman, M. L. Dasef, T. E. DeGurse, O. F. Dodge, A. Edwards, E. S. Ferguson, J. R. Foote, T. W. Forrester, L. Fox, W. E. L. Froggatt, J. M. Galbraith, A. J. Girardot, G. M. Gould, A. H. Gorenflo, H. A. Greiner, W. L. Helkie, J. C. Jacob, Jr., B. F. P. Johnston, E. H. Julien, P. S. Kellogg, G. Kempf, A. W. Kenning, J. D. Kirkpatrick, A. Knooihuizen, G. M. Leeson, D. A. Link, A. E. Lloyd, W. J. Lonergan, C. W. McColl, P. C. McEwen, S. A. McGregor, A. C. McKinnon, D. A. McLean, F. J. W. Maguire, F. R. Mitchell, J. W. Moore, C. D. Munro, J. Murray, O. L. Norris, C. H. O'Neil, A. A. Parisot, B. W. Pasternacki, F. A. Reilly, W. A. Repp, A. J. Reycraft, G. E. Reycraft, E. Rodenhuis, W. H. Rogers, G. Samter, W. Sellars, W. R. T. Sharpe, A. T. Sherman, B. R. Shurly, V. Sisung, J. H. Sloane,

P. H. Smith, B. Thomas, E. W. Tonkin, G. A. Vail, C. Walker, W. B. Wallace, H. J. Weld, W. A. Wilson, G. E. Winter, J. M. Wright.

THE DEPARTMENT OF MEDICINE AND SURGERY OF THE UNIVERSITY OF MICHIGAN.—Florence Almeda Amidon, A. J. Baumhardt, Louisa Teresa Black, H. H. Brooks, W. E. Brown, W. T. Burke, C. A. Burritt, D. R. Clark, E. O. Colvin, J. M. Cooke, T. B. Cooley, B. J. Downey, P. Doyle, H. M. Farnham, C. E. Fisher, B. S. Gailey, D. Gleysteen, Jr., W. B. Govan, Maria Louise Graham, Harriet Louise Hawkins, H. A. Haze, A. W. Herr, W. S. Hewitt, J. E. Hinkson, C. E. Hooker, G. F. Inch, F. Jacobi, A. H. Johnson, W. A. Kickland, F. J. Knight, Minerva M. Knott, H. G. Lampson, Eliza Ellen Leonard, W. S. Loomis, H. H. Lucas, R. J. Lynn, R. B. Martindale, E. H. Mathewson, S. A. Matthews, J. C. Maxwell, N. S. McDonald, R. J. McDonald, L. C. Miller, Lillian Belle Miller, J. A. Morrisey, Ellen Bradford Murray, E. S. Niblack, E. L. Niskern, G. G. B. Nusum, H. E. Odell, F. A. Olms, P. H. Quick, J. F. Ritter, E. H. Robertson, J. R. Rogers, D. C. Shields, C. L. Sigler, C. E. Stewart, G. W. Torrey, A. Uren, C. C. Warden, Frances Tudor Weed, G. H. Williamson, Jr., W. J. Woodlin.

THE MICHIGAN COLLEGE OF MEDICINE AND SURGERY OF DETROIT.—J. F. Alton, E. K. Bacon, Miss E. C. Bagley, W. W. Bowers, E. J. Buck, J. F. Darby, D. Geoffroy, L. H. Heetland, Miss E. Henderson, J. Innis, G. Keeley, C. L. Kennedy, G. Lavin, C. F. Mignin, H. L. Older, Mrs. N. W. Oliver, O. O. Osborn, G. Penton, E. F. Rondot, C. H. Rupprecht, J. Shellfish, H. J. Sloss, W. E. Smith, F. LeTonturier, J. W. Weed, W. S. Wiggins, W. Winters.

THE HOMEOPATHIC COLLEGE OF THE UNIVERSITY OF MICHIGAN.—W. H. Atterbury.

RECAPITULATION.

The Detroit College of Medicine,	76
The Medical Department of the University of Michigan,	64
The Michigan College of Medicine and Surgery,	27
The Homeopathic College of the University of Michigan,	1
Total, - - - - - - - - -	168

SANITARY SCIENCE TO BE TAUGHT IN OUR PUBLIC SCHOOLS.

THE legislature enacted at least one law last winter which will do great good in the state, and that is the one which requires the State Board of Health to supply public school superintendents and teachers with information from which they can teach the children in Michigan just how the most dangerous diseases are spread, and how they may be restricted. The law takes effect August 30, 1895, and reads as follows:

AN ACT to provide for teaching in the public schools the modes by which the dangerous communicable diseases are spread and the best methods for the restriction and prevention of such diseases.

Section 1.—The People of the State of Michigan enact, That there shall be taught in every year in every public school in Michigan the principal modes by which each of the dangerous communicable diseases are spread and the best methods for the restriction and prevention of each such disease. The State Board of Health shall annually send to the public school superintendents and teachers throughout this state printed data and statements which shall enable them to comply with this act. School boards are hereby required to direct such superintendents and teachers to give oral and blackboard instruction, using the data and statements supplied by the State Board of Health.

Section 2.—Neglect or refusal on the part of any superintendent or teacher to comply with the provisions of this law shall be considered a sufficient cause for dismissal from the school by the school board. Any school board willfully neglecting or refusing to comply with any of the provisions of this act shall be subject to fine or forfeiture, the same as for neglect of any other duty pertaining to their office. This act shall apply to all schools in this state, including schools in cities or villages whether incorporated under special charter or under the general laws.

THE ELECTROCUTION OF DOCTOR BUCHANAN.

Doctor Robert W. Buchanan, the wife poisoner, was electrocuted at Sing Sing, on June 30. It was pronounced the quickest and most successful execution ever performed in that prison. The body was subjected to a voltage of 1,740 for four seconds; the force was then reduced to forty volts, at which it was maintained for thirty seconds; and life was pronounced extinct in forty seconds. Doctor Buchanan was born of Scotch parents on October 17, 1862, and began business as a drug clerk in Halifax, Novia Scotia, shortly after he left school. When a little over twenty-one years of age he graduated from the College of Physicians and Surgeons in Chicago. He returned to Halifax and soon afterward married Miss Helen J. Patterson, a young woman of good family. Subsequently Buchanan, accompanied by his wife, went to Edinburgh, Scotland, for a course at that city's celebrated university. The doctor and his family returned to this country in 1887 and settled in New York City. Debts accumulated rapidly and the young physician, having picked up some undesirable companions, began to drink. In 1890, his wife, whom he accused of faithlessness, separated from him, leaving their child in his charge. After this separation Buchanan met a woman named Annie Sutherland, who had kept a house of ill-repute in Newark, and she became infatuated with him. He secured a divorce from his first wife and married the Sutherland woman in 1890. This woman, who was reputed to be very wealthy, made and signed a will in the doctor's favor. She was old enough to be his mother, and when they went to live at 267 West Eleventh street, New York, he passed her off as a wealthy widow who insisted on being his housekeeper. On April 22, 1892, his second wife became sick suddenly. A doctor was called and Buchanan told him his wife had kidney trouble. A dentist's wife and a professional nurse who attended the woman saw Buchanan administer two spoonfuls of medicine to the sick woman that evening. On the following evening, April 23, Mrs. Buchanan died, while Buchanan was absent on a professional call. This death netted Buchanan $40,000. On June 5 the body was disinterred and an autopsy held. The following day Buchanan was arrested and committed to the Tombs on a charge of murder. His trial, which was a very sensational one, was begun on march 20, 1893. It cost the county about $30,000.

MINOR INTELLIGENCE.

Medical Director Albert C. Gorgas, of the United States Navy, died in Philadelphia on the 29th ultimo, aged sixty years. He entered the navy in 1856.

A portrait of the late Doctor William Goodell, and a bronze bust of the late Doctor Joseph Leidy, have been donated to the University of Pennsylvania.

Dartmouth Medical College has raised the standard of admission.

A woman recently died at Millersburg, Ohio, who weighed 675 pounds.

Doctor M. G. Sloan, of Dexter, Iowa, has introduced a new evacuator.

The meat inspection regulations issued by Secretary Morton took effect July 1.

Opium eaters in India average from four to twelve grains of the drug per day.

Peoria, Illinois, has a woman health commissioner—Doctor Emma Johnston Lucas.

Doctor L. D. Sunderlin, of Pewamo, succumbed to paralysis on the 10th instant.

Trendelenburg occupies the chair of Surgery in Leipsic, having succeeded Thiersch.

Phenacetine and sulphonal have been smuggled into the United States through Canada.

The Académie de Médicine has conferred honorary membership upon Professor Von Esmarch.

The Michigan State Pharmaceutical Association held its thirteenth annual meeting in Detroit on July 16.

The qualified practitioners in Belgium number 2950; 1 to 2122: the midwives number 2372; 1 to 2640.

Doctor Aristide Verneuil, the distinguished French surgeon, recently died in Paris, aged seventy-two years.

The *Medical and Surgical Reporter*, of Philadelphia, will hereafter be edited and published in New York City.

The ninth congress of the French Association of Surgery will convene in Paris on the 21st of October, 1895.

The chair in Bonn which has been vacated by Professor Trendelenburg will be occupied by Professor Mikulicz.

A section on rectal medicine is one of the probabilities of the next meeting of the American Medical Association.

Doctor Lewis A. Sayre, of New York, has been elected an honorary member of the Belgian Society of Surgery.

Galveston, Texas, has a medical mayor for a second time, Doctor A. W. Fly having been reëlected to that office.

Doctor Buchanan, the wife murderer who was electrocuted on June 30 had a brain weighing only thirty-one ounces.

The North Carolina Medical Society has dignified Doctor Louis McLane Tiffany, of Baltimore, by honorary membership.

Doctor James N. Hyde says there are 560 lepers in the United States, California leading as their place of abode with 158.

The twenty-sixth annual meeting of the Medical Society of Virginia will convene at Wytheville, on September 3, and continue its sessions four days.

Doctor George B. Fowler has been appointed Health Commissioner of New York City *vice* Doctor Cyrus Edson resigned.

Milwaukee registered 524 cases of small-pox from October 6, 1894, to March 23, 1895, the disease resulting fatally in 164 cases.

In suits to recover for professional services physicians are not allowed to make disclosures of the physical afflictions of defendants.

On August 12 the Gynecological, Obstetrical, and Pediatrical Congress will convene at Bordeaux, and continue its sessions four days.

The Second International Congress of Gynecology and Obstetrics will convene in Geneva, Switzerland, the first week in September, 1895.

The Laura Memorial Medical College recently inaugurated in Cincinnati, has already absorbed the Woman's Medical College of that city.

The first annual meeting of the Utah State Medical Society will be held on October 1 and 2, under the presidency of Doctor F. S. Bascom.

W. H. Schieffelin is dead, and the well-known New York drug firm of W. H. Schieffelin & Company is succeeded by Schieffelin & Company.

Rheumatic appendicitis is the latest addition to medical nomenclature. The affliction is caused by uratic deposits and can be cured by the salicylate of soda.

The ninth annual meeting of the American Orthopedic Association will be held in Chicago, on September 17, 18, and 19, under the presidency of Doctor John Ridlon.

A ptomain has been discovered in the urine of cancer patients. It is a white substance, crystallizes in needles, and has an alkaline reaction. The discoverer is M. Griffiths.

The Cincinnati University has been made the recipient of a $50,000 gift from Henry Hanna. The money will be expended in building a north wing to that institution.

Influenza has cost the large English insurance companies $600,000. This disease has cost the companies more during the two last years than during the preceding forty-three years.

The seventeenth ward in Chicago has a population of thirty thousand, over one-half of whom are foreign born, mostly Scandinavians. Of this number there are 3,200 more males than females.

The article by Doctor E. L. Shurly, published in our last issue, was read before the Saginaw Valley Medical Association. It was inadvertently credited to the Detroit Medical and Library Association.

Clinical instruction in mental diseases is now given at the University of Giessen. There are now only two universities in Germany which have no psychiatric clinic—those at Kiel and Rostock.

The forty-ninth annual meeting of the Wisconsin State Medical Society was held at West Superior, on June 19, 20, and 21. There was a large attendance and the program contained the titles of sixty-six papers.

In ten years—1884–1893—consumption caused 21,402 deaths in Michigan; pneumonia, 11,071; diphtheria, 10,048; typhoid fever, 5,908; scarlet fever, 3,195; measles, 1,767; whooping-cough, 1,459, and small-pox, 29.

The Third International Congress of Physiologists will convene in Bern, on September 9, under the presidency of Professor Kronecker, and continue its sessions five days. French, German, and English will be the official languages.

The Medical Department of the Georgetown University will henceforth require all matriculates to attend day lectures and clinics. The practice heretofore in vogue, of conducting a night school and manufacturing "sunset doctors" will be abolished.

Doctor William C. Grace, of England, has achieved distinction by having made two hundred runs at cricket, and now a London daily paper has started a testimonial fund to which the people are graciously contributing. Nearly $10,000 has already been collected.

The Medico-Legal Society of Chicago has elected the following officers for the current year: President, Doctor Edmund J. Doering; vice-presidents, Doctors Cassius D. Wescott and Sanger Brown; secretary, Doctor John Ridlon; treasurer, Doctor Joseph Matteson.

For the purpose of solving the question, "Is leprosy curable and what are the best means for its relief and eradication from the human system?" the Board of Health of the Hawaiian Islands has established a hospital at Kalihi, in the vicinity of Honolulu, for the treatment of lepers.

The legislative committee appointed to investigate the State Board of Health found that the charges set forth could not be proved, in substance or in spirit, in general or in particular. The committee characterized them as unfounded, and undoubtedly prompted by ill-will; and so far as made on the floor of the House they must have been the result of deception practiced upon members.

The American Climatological Association convened in twelfth annual meeting at Hot Springs, Virginia, on June 13, 14, and 15, 1895. The following are the newly installed officers: President, Doctor J. B. Walker, of Philadelphia; vice-presidents, Doctors Charles E. Quimby, of New York, and James A. Hart, of Colorado Springs; secretary and treasurer, Doctor Guy Hinsdale, of Philadelphia.

The Children's Free Hospital, which is now in process of erection in Detroit, will be five stories in height and fitted with every modern appliance for the care of sick children. The building is T-shaped in form, 180 by 180 feet superficially, but only one of the arms of the T will be constructed at present. The walls will be of Roman brick from Ohio, trimmed with brown stone, and the roof will be of slate.

The statute books of Oregon contain a law which provides that physicians, before prescribing opium, morphine, or other narcotics, shall procure a license from the county clerk and record each prescription in a book designed for such purpose, the entries to be accessible to public inspection. It is gratifying to know, however, that this harassing legal enactment is not complied with, common consent having relegated it to the dead letter category.

DELAWARE has a new medical law. It provides for two boards of examiners, regular and homeopathic medicine being represented; and imposes a fine of $500 or not more than one year's imprisonment for persons convicted of practicing without a license. The law became effective this month.

RUSH Medical College, of Chicago, has created a new degree. It will be known as Doctor Medicinæ Civitatis—Doctor of State Medicine—and will be conferred as a graduate degree upon Doctors of Medicine of not less than one year's standing. Candidates for this degree will be required to pursue a six months' course of practical instruction in a laboratory approved by the faculty, and study practical outdoor sanitary work for four months under an approved health officer.

SAINT LUKE'S HOSPITAL, of New York, has been enriched $200,000 by the will of the late Rufus Waterhouse. The money will be applied to establishing and maintaining the "Mary S. Waterhouse Memorial Ward" for consumptive sewing women and those afflicted with consumption who are dependent upon sewing women. Mr. Waterhouse's wife died of phthisis, and having been a wholesale clothing manufacturer, he had observed much misery and phthisis among the sewing women in his employ, hence this form of bequest.

THE homeopathic physicians of Detroit recently held a largely attended meeting to consider the removal of the Homeopathic College of the University of Michigan to the state's metropolis. After a thorough discussion of the question the following resolution was adopted: "*Resolved*, That we recognize the endeavor of the regents to comply with the provision of the act of the legislature, providing for the removal of the homeopathic department to Detroit. We also recognize the necessity of continuing the present organization at Ann Arbor, but insist upon the creating of a four-years' course and a full faculty at Detroit at the earliest possible moment."

THE Colorado State Medical Society held a very successful meeting in Denver, on June 18, 19, and 20. Over one hundred and fifty members were present; the program contained the titles of sixty papers; the membership was increased sixty-two; and the following officers were elected: President, Doctor I. B. Perkins, of Denver; vice-presidents, Doctors A. J. Robinson, of Aspen, Lee Kahn, of Leadville, and Mary Ambrook, of Boulder; corresponding secretary, Doctor E. R. Axtell, of Denver; recording secretary, Doctor Lawrence Liebhart, of Denver; assistant recording secretary, Doctor H. H. Bucknum, of Denver; treasurer, Doctor W. F. McClelland, of Denver.

THE Medical Society of the State of Pennsylvania has adopted a novel procedure for increasing membership in county societies. Through the chairman of the Committee on Increase of Membership and Extension of Polyclinic Teaching the announcement is made that a number of prominent physicians in Philadelphia and other important cities in that state will, upon invitation, visit these societies for the purpose of reading papers or holding didactic or clinical lectures. The list embraces about seventy-five physicians, and as the array of topics is varied and inviting the movement will undoubtedly prove successful. In case the county society is unable to bear the expense the state society will contribute from a fund created for the purpose.

CONTEMPORARY OPINION.

SIGNING TESTIMONIALS.

[THE MARYLAND MEDICAL JOURNAL.]

MANY drugs and preparations sell on their own merits and others again need the support of names and testimonials to make them "go." It has always been a question with some physicians whether they should sign their names to testimonials or not. If a preparation is good and has given satisfaction in the hands of a physician it may seem right that he should be willing to testify to its good effects, but as in everything else, it is very hard to draw the line.

As a rule physicians in the cities do not care to give their names to preparations, although they may use them and have the greatest faith in them. Many firms send out lists of testimonials from physicians all over the country, and when one reads the names from his own particular section of country or city, he often hesitates about using the preparation. Too often the names of those long since dead are used. Many reputable firms are in possession of the signatures of well-known physicians who have attested to the excellence of a compound and yet who have asked that their names be withheld from publication and the most reliable firms usually heed all such requests.

If some drug houses seeking after notoriety would not misuse names sent to them in an entirely innocent way, more letters of praise and commendation for good work would be sent by physicians to such firms than is the case at present. Some drug firms have one very subtle way of holding the attention of the public, and that is by securing the services of good men of good reputation and yet who are not above writing up any preparation that may be sent, and sending the papers to journals as original and independent contributions.

Such acts shake one's faith in human nature very materially. If a preparation is good and it is used in a certain number of cases with success, there should be no wrong in publishing these facts, but the very fact that so many articles are by writers whose names are known in the profession who write up papers containing sealed advertisements, works against a good article when it is contributed. Manufacturing druggists are so powerful that they can command the best talent, and they find little difficulty in securing a man to say good things about their preparations, putting it in the form of his own experience. All such acts tend to weaken the advertising of reputable and reliable drug preparations, and raise an amount of septicism toward medical journals as it does toward the daily paper, the reader of which begins some wonderful account, only to find that it ends in the praise of some tonic or cough syrup.

RECENT PUBLICATIONS.

REVIEWS.

THE ART OF MASSAGE.*

THIS manual affords the most complete and systematic treatise on the subject that has yet appeared. It opens with a brief sketch of the history of massage in which the Chinese are credited with its employment three thousand years before the Christian era. This is followed by an outline of the parts especially concerned in massage, and a statement of the physiological effects of this treatment, after which a chapter is devoted to its therapeutic applications, wherein concise directions are given for over forty manipulations. The procedures of massage are considered in detail under the heads of touch, stroking, friction, kneading, vibration, percussion, and joint movements. These divisions embrace a number of procedures not hitherto described in any text-book, but which are of great practical value in connection with abdominal and pelvic massage.

The succeeding chapters are devoted to studying practical massage of special regions, mechanical massage, scientific physical training, individual and comparative muscular strength in men and women, rest cure, et cetera.

A noteworthy feature of the work is the illustrations. It contains one hundred and thirty-nine cuts and forty-five plates, eleven of the latter being printed in colors. Every procedure is illustrated by half-tone engravings from original photographs, a desideratum that will commend the book to persons seeking proficiency in massage without the aid of a living teacher.

The mechanical execution of the work is excellent.

*By J. H. Kellogg, M. D., Member of the British Gynecological Society, the International Periodical Congress of Gynecology and Obstetrics, American and British Associations for the Advancement of Science, the Société d'Hygiène of France, American Society of Microscopists, American Climatological Society, American Electro-Therapeutic Association, Tri-State Medical Society, American Medical Association, Michigan State Medical Society, Superintendent of the Battle Creek (Michigan) Sanitarium. One volume of 282 pages. Price, half leather, postpaid, $3.00. Battle Creek, Michigan: The Modern Medicine Publishing Company.

SMALL HOSPITALS.*

THE author of this little volume advocates the establishment of small hospitals in our larger towns and smaller cities. Part I treats of the advantages of small hospitals to the community, the mode of procedure for effecting organization, the medical question, the nursing service, the admission of patients, the hospital finances, et cetera. Part II gives suggestions for hospital architecture with plans for a small hospital. The work contains much information that will prove valuable to physicians who contemplate becoming identified with hospital organization.

*By A. Worcester, A. M., M. D., and William Atkinson, architect. 16mo Cloth. One hundred and fourteen pages. New York: John Wiley & Sons.

THE EVOLUTION OF THE DISEASES OF WOMEN.*

THE volume under consideration affords an exhaustive contribution to the study of the diseases of women. In the introduction the announcement is made that "this book is not a compilation; all that is written is individual." The author then proceeds to express his ideas upon the relation of the sexes, and the influences of civilization on the sexual relations and on woman, after which the resulting evolutionary diseases of women are systematically considered in separate chapters. The discussion of each disease includes definition, condition, causes, mode of causation, evolution, symptoms, diagnosis, and prognosis. The treatment of all diseases considered is embodied in an independent chapter, and while the armamentarium of medical and surgical measures recommended contains nothing hitherto unemployed, still the lucid manner in which the various procedures are detailed will doubtless have the effect of popularizing this manual among physicians who essay to do gynecological practice.

*By W. Balls-Headley, M. A., M. D., (Cantab.), F. R. C. P. (London), Lecturer on Midwifery and the Diseases of Women at the University of Melbourne; Honorary Physician to the Women's Hospital; President of the Section of Obstetrics and Gynecology at the Intercolonial Medical Congress, Sidney, New South Wales, 1892; Late President of the Medical Society of Victoria, et cetera. Cloth; 375 pages; illustrated. London: Smith, Elder & Company, 15 Waterloo Place.

SKIASCOPY, AND ITS PRACTICAL APPLICATION TO THE STUDY OF REFRACTION.*

In the preface the author states that this little work was written for the purpose of bringing about "the more general adoption of skiascopy as an essential part of the examination for ametropia." After a brief historical sketch reciting the origin of the name and the best method of studying the test, a discussion of general optical principles ensues, in which myopia, emmetropia, and hyperopia are considered. Succeeding chapters are devoted to conditions of accuracy, regular astigmatism, aberration and irregular astigmatism, application of plain and concave mirrors, et cetera. The subject is clearly, concisely, and practically set forth, and students of skiascopy will find the monograph very interesting reading.

*By Edward Jackson, A. M., M. D., Professor of Diseases of the Eye in the Philadelphia Polyclinic; Surgeon to Wills' Eye Hospital, et cetera. Cloth; 12mo; 112 pages with 26 illustrations, mostly original. Price $1.00. Sent postpaid on receipt of price, or may be obtained through medical booksellers. Philadelphia: The Edwards & Docker Company, 518 Minor street.

REMOTE CONSEQUENCES OF INJURIES OF NERVES AND THEIR TREATMENT.*

The volume bearing this title treats upon a subject of extreme interest to physicians and surgeons. In 1864 a small book was published, by Doctor Weir Mitchell and others, detailing the early effects of gunshot and other injuries of nerves sustained by soldiers to whom they were ministering in the United States Army Hospital at Philadelphia, during the civil war; and several years later Doctor Mitchell brought out another work which dealt more extensively with this subject. The present monograph is an examination into the late consequences of the injuries recorded in the previously issued books, supplemented by the introduction of cases of injuries occurring in civil life. Each case is accorded a brief history of the early consequences and treatment of the wound, together with a statement of the later results and present condition.

*An examination of the present condition of wounds received in 1863-5, with additional illustrative cases. By John K. Mitchell, M. D., Assistant Physician to the Orthopedic Hospital and Infirmary for Nervous Diseases, Philadelphia; Lecturer on Physical Diagnosis in the University of Pennsylvania. In one handsome 12mo volume of 233 pages, with 12 illustrations. Cloth, $1.75. Philadelphia: Lea Brothers & Company.

REFERENCES.

PERIODICAL LITERATURE.

THE POPULAR SCIENCE MONTHLY.

THE issue for July is opened by a second paper on "New Chapters in the Warfare of Science," by Andrew D. White, LL. D., Ph. D., which is followed by a paper entitled "The Bowels of the Earth" (illustrated), by Alfred C. Lane. "Climate and Health," by Doctor Charles Fayette Taylor; "A Medical Study of Jury System," by T. D. Crothers, M. D., and "Why Children Lie," by Nathan Oppenheim, M. D., will be found especially interesting to the medical profession.

LITTELL'S LIVING AGE.

THAT the July numbers of this weekly maintain the journal's excellent reputation will be seen from the following partial table of contents: "Walter Savage Landor," by John Fyvie; "Italian Disunion," by Joseph Crooklands; "A Journey to Scotland in the Year 1435," by J. J. Jusserand; "Napoleon at Saint Helena—a Reminiscence;" International Law in the War between Japan and China," by T. E. Holland; "The After-Careers of University-Educated Women," by Alice M. Gordon; "Advertising as a Trespass on the Public," by Richardson Evans. Besides this list there are several short stories by the best writers.

DONAHOE'S MAGAZINE.

THE July issue of this popular magazine will be found particularly interesting. Its leading article, by Charles S. O'Neill, is entitled "In the Footsteps of Father Damien," and besides being well written is finely illustrated. "Large Fortunes and Low Wages," by Edward McGlynn, D. D., is a very timely article. "Catholic Summer Schools," by John Talbot Smith; "The Present Irish Literary Movement," by D. J. O'Donoghue; and "Some Pioneers of American Journalism," by Michael E. Hennessy, are indicative of the great interest displayed in education by the Irish element.

THE ARENA.

THE July issue of this periodical will be found an interesting number for almost all classes of readers. Social purity is thoroughly discussed in the articles—"The Right of the Child Considered in the Light of Heredity and Parental Influence," by B. O. Flower, and "Opposing Views by Legislators on the Age of Consent,"—a symposium by representative men. Social, economic and political problems are each taken up in the following well-written articles: "Child Life and the Kindergarten;" "Outline of a New Philosophy of Money;" "The Standard Oil Monopoly;" and "Representative Women on Social Problems."

LITERARY NOTES.

P. BLAKISTON, SON & COMPANY announce the early issue of a "Handbook of Diseases of the Eye." It will be an authorized translation by Doctor Albert B. Hale, of Chicago, of the original work by Doctor A. Eugen Fick, of the University of Zurich, which is one of the most complete, thorough, and compact of textbooks. Among its other merits it contains a number of very handsome colored illustrations, not of rare or unusual cases, but of practical matters that will greatly aid the student and be of much service to the practitioner.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THE TREATMENT OF MALIGNANT GROWTHS BY THE INJECTION OF ERYSIPELAS TOXINS.*

BY W. M. DONALD, M. D., DETROIT, MICHIGAN.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

WE know that the mortality from tuberculosis is infinitely greater than from cancer, and yet I venture to assert that in the mind of the public, cancer is regarded with more dread and more fear than tuberculosis, or in fact than almost any other disease. There is an insidiousness, a relentlessness, a hopelessness about cancer which can inspire naught but the utmost fear and repugnance. We can with propriety speak of consumption in the words of HOLMES as "the white plague of the north," and of cancer as the black plague of the modern world. And of course when we speak of cancer in this general way we include all malignant growths, for the differentiation of carcinoma and sarcoma in the lay mind, and I fear in many a medical mind also, is vague if not unknown.

Since the advent of anesthesia the horror of operative procedures has been greatly lessened, but even yet the dread of the knife keeps many a poor victim from seeking relief until it is too late for the knife to do anything for them. Any remedy, then, which will negative the use of the knife, even in a few cases, is worthy of our consideration, and if the remedy will cure where the knife cannot it is entitled to our unbounded support.

Under the first head will come, then, the treatment of superficial epitheliomata by caustics, which has been popularized by MARSDEN, of London, and carried on successfully by many of his disciples, especially BOUCHARD and MAISSONEUVE in France and ROBINSON in New York. Of this branch of the subject it is not our province to speak; suffice it to say that these men and others are doing scientifically and successfully what charlatans were and are doing in blind ignorance, and yet successfully. I know it amounts almost to heresy in certain circles to speak of the cure of cancer by any other method than the knife, and yet, surgeons to the contrary notwithstanding, it has been and is being done constantly by the use of caustics.

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*Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

Under the second head mentioned above, namely, remedies which may cure where the knife cannot, will come, according to its supporters, the injection of either the cocci or the toxins of erysipelas in inoperable malignant growths.

To DOCTOR W. B. COLEY, of New York, one of the surgeons at the New York Cancer Hospital, belongs probably whatever credit is attached to the introduction of this method of treatment. Others had, of course, preceded him, but he has systematized the knowledge and elaborated the modes of administration.

In 1892 he published his first report of cases, ten in number, and ever since has been experimenting along the same lines. Variations in method have been effected in his search for light, but the principle has remained the same, namely, that the virus, or poison, or germ, of erysipelas contained something noxious to the growth of *cancer*, or more specifically *sarcoma*.

For many years it has been known that an accidental attack of erysipelas upon a part affected by a malignant growth might be curative so far as the growth was concerned. A demonstration of this fact came under DOCTOR COLEY's notice, and urged him to experimentation with erysipelas inoculation. He first used injections of pure cultures of the streptococcus of erysipelas into the tumor, and aimed at producing an attack of the latter disease. A fatal result in several cases, however, from erysipelas checked his enthusiasm. The fact, moreover, that more rapid improvement was shown in those cases where erysipelas was not produced by inoculation, led him to the conclusion that the toxin of the cocci was the remedial element, and caused him to turn his attention in that direction.

ROGER, of Paris, having demonstrated that in rabbits, at least, the bacillus prodigiosus has the power of intensifying the action of the coccus of erysipelas, led to a modification whereby the toxins of this bacillus were used in connection with those of the erysipelas coccus. And it may be worth while to digress here for a moment to remind ourselves that this harmless, non-pathogenic bacterium, the bacillus prodigiosus, has been found to modify the course of a variety of diseases, either by intensifying or lessening their severity. This illustrates the possibility of a mixed infection in certain cases, as indeed we find in diphtheria and also in tuberculosis. I refer to the LOEFFLER bacillus and the various forms of cocci in the first case, and KOCH's bacillus with numerous pus and septic organisms in the second.

But to return to our subject. A few months ago DOCTOR COLEY in New York, and DOCTORS EMMERICH and SCHOLL in Germany, acting, however, independently of each other, began experiments upon the use of a toxin, or perchance it may be an antitoxin, obtained through the medium of inoculated animals. COLEY used the horse, and immunized him by gradually increasing doses of the erysipelas cocci—much as is done in the production of the diphtheria antitoxin—and then withdrew the serum for use. The two Germans, on the other hand, inoculated sheep with erysipelas, killed them by bleeding shortly afterwards, recovered the serum, filtered it to remove the streptococci of the disease, and then used the serum for injections. The great advantage that these methods of administration possessed over the previous ones was that the reaction was very much lessened. With the injection of the cocci themselves, profound and often serious complications followed. When the toxins of the cocci were substituted the reaction was not nearly so well marked. True, under moderate dosage, a temperature of 104° or more was often produced, preceded by a violent chill, and followed by complete exhaustion. But these effects were temporary only, the patients after the lapse of about twelve hours feeling as well as before the injection. With the use of the serum from inoculated animals, in the hands of all these observers, all unpleasant effects were absent. The highest observed temperature was 102° Fahrenheit, and EMMERICH states the effect upon the general system to have been only pleasant; malaise, anorexia, and headache being absent. Another point worthy of note with the serum treatment was that a number of the cases which exhibited gratifying improvement were true cancer, whereas under the previous methods of treatment only sarcoma (spindle-celled and mixed) seemed to be favorably influenced.

With this résumé of the progressive methods of treatment, permit me to present a report of three cases, one treated by the injection of the toxin of the erysipelas coccus alone, the other two by the injection of the combined toxins of the streptococcus erysipelatis and the bacillus prodigiosus.

Case I.—A. S.; male; German; laborer; aged forty-three years; came under my care at Saint Mary's Hospital, September 30, 1894, complaining of a swelling in the abdomen. Examination revealed a growth the size of a hen's egg in the abdominal walls at the umbilicus. Diagnosis of probable cancer was made and the case referred to DOCTOR T. A. MCGRAW for operation. DOCTOR MCGRAW suspected the umbilical growth to be secondary, and discovered, on examination, a large primary growth high up in the rectum. Diagnosis of sarcoma was made and the case referred back to me as inoperable.

A supply of the toxin of erysipelas was procured from New York after some delay and injections commenced. The patient by this time, one month after he was first seen, had lost ground rapidly. He was emaciated, profoundly anemic and cachectic, with no appetite, and had constipation from obstruction in the rectum. All in all, he was a very poor subject for any kind of treatment. Injections into the umbilical growth were given every two, three, or four days, depending upon his ability to reach the hospital. They ranged in quantity from one-half cubic centimeter to one and a half cubic centimeters. The usual reaction was observed, namely, in about one hour from the time of administration a more or less severe chill with a temperature of 99.5° to 101°; this would be followed by extreme weakness and in a few hours the temperature would return to normal. It was not considered advisable to give a larger dosage of the medicament owing to the patient's extremely debilitated condition. After a few injections the growth at the umbilicus appeared to decrease slightly in size, but the rectal growth showed no change. For several days the patient expressed a feeling of decided improvement in his general condition, but none was manifest to the observer, and it is not unlikely to have been largely psychical in character. He was treated with about ten or twelve injections, then became too weak to come to the hospital, and as it was plainly manifest that the end was approaching, further treatment was discontinued.

Case II.—S. G.; male; aged forty-four years; German Jew; peddler by occupation; was admitted to Saint Mary's Hospital under care of DOCTOR

McGRAW, on November 13, 1894, and gave the following history: About six months ago he noticed a small lump on the right side of the neck, just behind the angle of the jaw. It grew steadily in all directions, and soon the pain became extremely severe from pressure. Family history nil, and personal history good previous to the onset of this trouble. On admission the growth was about seven inches in diameter, indurated and shiny. Temperature normal, pulse rapid and weak, appetite fair, but deglutition was interfered with from pressure of the growth. Diagnosis—Sarcoma, inoperable; referred to me for treatment.

About every second day the patient was given one-third cubic centimeter of the toxin of erysipelas, with the usual chill, fever, and systemic reaction following. After one month's treatment there was no improvement in his general condition or in the character of the growth. I then substituted the combined toxins of the coccus of erysipelas and the bacillus prodigiosus. Objective symptoms were still practically unchanged, though slight signs of softening began to make themselves evident. Subjectively, however, the patient was much improved; so much so that whereas at first persuasion was necessary to secure his consent to the injections, after the change of treatment he asked for the injections more frequently. He always had a severe reaction, the temperature sometimes being 103.5°, but he claimed that in a few hours he felt very much better than before he received the injection. He was kept under treatment for about another month—two months in all—after which there being no change objectively, he became discouraged, left the hospital, and escaped observation.

Case III.—A. C.; male; aged forty-one years; American; farmer; was admitted to Saint Mary's Hospital as a private patient of DOCTOR McGRAW on November 15, 1894. His history was as follows: Three months previously he had a tooth extracted for severe toothache. The pain was relieved, and all was well for several weeks, when the pain returned and a localized swelling appeared at the seat of extraction. This suppurated and opened spontaneously externally over the lower jaw. A sinus remained which, on admission, was still discharging pus. Induration surrounding the sinus was marked. His general condition was poor. Family history nil. Diagnosis—Carcinoma.

This patient was treated with the mixed toxins every second day for two weeks. The ordinary reactions followed but there was little manifest improvement. He left the hospital then to return home, and to carry on the treatment with his family physician. He claimed before leaving that he felt a good deal stronger.

One cannot but admit that the reports of these three cases are unsatisfactory; but it must be remembered that of the three the first one was practically dying when he commenced treatment, and the third one was carcinoma, which COLEY found to be unimpressionable to the action of the toxins. And yet these two expressed a sense of improvement, which I can hardly look upon as entirely psychical. The second one, that of sarcoma in the neck is, then, the only one that can be considered a fair test case True we did not cure him, but I felt that we helped him somewhat; and I have fancied that if he had continued treatment, and if we had pushed treatment, we might have helped him more. We never felt justified in pushing the dosage beyond one-fifth cubic centimeter on account of the resultant profound depression, and yet in all three cases the temperature never but once rose above 103°. It usually varied from 100° to 102°. Coley pushed his doses almost always to the production of a temperature of 104° or 105°, and appeared to have no bad after effects. In another suitable case I should push to this point also, as I have thought that our conservative methods may have accounted for our meagre results.

I believe I was the first to use this method of treatment here in Detroit, but I understand that several other gentlemen are testing it at the present time. So far from being discouraged with the results of these three cases, I eagerly await another series of cases for a further test. Unfortunately the toxins are expensive and keep badly, but should the demand become greater no doubt the expense could be considerably reduced.

I have not spoken of the mode of action of these toxins. This, like the etiology of cancer, is *terra incognita*. Cohnheim's theory of embryonic errant cells, the theory of decreased physiological resistance, the nervous theory, the parasitic theory, all have their advocates, or have us as advocates under certain moods. If, however, these toxins should prove curative it would lend decided force to the argument in favor of the parasitic theory.

PALLIATIVE TREATMENT OF MALIGNANT DISEASES OF THE UTERUS.*

By H. W. LONGYEAR, M. D., Detroit, Michigan.

In advanced cases of malignant disease of the uterus where any treatment applied to the eradication of the malady is hopeless—and I should class all cases as beyond hope of cure in which examination shows that the disease has extended into the broad ligaments, rectum, bladder or other viscera—then such treatment should be pursued as will conduce to the comfort and prolongation of life of the patient. Whatever our individual ideas may be regarding the value of life when beset with the horrors of malignancy, and however unpleasant our task while waiting with forced cheerfulness for the hair to snap that holds the sword of Damocles over our patient's head, it is still our duty as physicians to preserve that life as long as possible and to make its possessor as comfortable as our wisdom and skill, and I may add, our kindness and tact, will permit. These are the cases that apply to the abdominal surgeon too late—the cases of mistaken diagnosis, many of which are treated with busy speculum and swab from week to week, and month to month; ignorance holding sway until the disease passes beyond the reach of knowledge—cases of whom it may well be said:

> "The saddest words of tongue or pen
> Are these: 'it might have been.'"

The treatment should be both constitutional and local, and practically the same in all varieties of malignant disease.

The *constitutional treatment* should be not only medicinal but mental and dietetic as well, and I always consider the mental part of it first, as the comfort of the patient is vastly enhanced by a cheerful, hopeful condition of the mind and the resultant harmonious action of the nervous system.

In the first place do not tell the woman that she has a cancer unless it is positively necessary to do so. Some intimate friend or relative may be informed for the purpose of protecting your reputation, and the patient informed that she has a growth that cannot be positively cured, but may be much benefited by attention to her general health and the application of appropriate local treatment. The word "cancer" carries with it such a world of horror to most women that it is usually better for the patient's peace of mind to avoid using this term when possible.

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* Read before the Michigan State Medical Society, at Bay City, on June 6, 1895.

Then they may be cheered, even if they know the nature of their malady, by the assurance that the disease is often slow in action and that its debilitating effects may be controlled to a large extent by judicious diet, healthy surroundings and proper treatment. The environments of the patient should not be neglected; her surroundings should be as cheerful and sanitary as her social position will admit. The diet should be as nutritious in blood-making properties as possible, consisting largely of albuminoid substances, such as fresh meats, eggs, fish, milk, et cetera. The use of a good red wine with the food will often be useful in assisting digestion. The medicines administered should be mainly of a tonic character, and such as will tend to enrich the blood and strengthen the nervous system, with especial reference to increasing the red blood corpuscles, thus counteracting the natural tendency of the disease to extreme anemia. For this purpose I have found nothing better than the use of iron by hydrogen, arsenious acid and sulphate of strychnia, given combined in tablet form. In the majority of cases, medicines will have to be given for the relief of nervousness, insomnia, and pain, and for this purpose I begin by using the mildest sedatives and analgesics first, and only those that will in their action least disturb the physiological functions of the body. Hence I use the stronger narcotics, such as morphia and other preparations of opium, only when obliged to by the failure of less powerful remedies, as their effect in locking up the secretions and inducing derangements of normal functionation of stomach and bowels is such that the system is weakened and the end hastened. Toleration of opium is also so rapid in some cases that if its use is begun early it may become worn out and worthless when the most painful and trying stage of the disease arrives. It should be held as a *dernier ressort* and only used for the relief of severe pain; in this way it can be made of the greatest comfort to the sufferer and will not fail in the hour of her greatest need. Cannabis indica, hydrobromate of hyoscin, acetanilid, phenacetin, antipyrin, et cetera, may be judiciously used for a long time before resorting to opium, and in fact cases often occur in which opium is not indicated during the whole course of the disease. Pain is not invariably present in cancer of the uterus; neither is the intensity of the pain the same in all cases, consequently the administration of analgesics and narcotics will necessarily depend on the indications in each individual case.

The *local treatment* is of the utmost importance as on its efficiency depends much of the comfort of the short life of the patient. The treatment is of course entirely symptomatic and should be directed:

(1) To checking the hemorrhage.

(2) To diminishing the offensiveness of the discharge.

(3) To relieving the pain.

To *check hemorrhage* the treatment should be general and local. If the bleeding is considerable the general treatment may consist in keeping the patient quiet in bed and the use of ergot and hydrastin (alkaloid) by suppository, per rectum.

In the local treatment of hemorrhage, plugging by the use of the tampon should be first considered, as it can always be quickly used to temporarily stop the flow until more radical measures can be arranged for. The maneuver is best and most expeditiously accomplished with the patient in the knee-chest position, when, with a **Sims** speculum, or two fingers of the disengaged hand, to retract the perineum, the vagina can be quickly filled with a kite-tail tamponade. If the pledgets are previously wrung out in an antiseptic solution they may be left in position for three days. Glycerite of tannin, or other astringent, may also be used on the cotton. The curette may be advantageously used, for by scraping away all of the soft tissue and leaving only the hard material composing the cancer, the bleeding will be very thoroughly controlled. For this purpose **Simon's** sharp spoon is the most useful. Still better results are obtained if, after using the curette, the actual cautery or strong caustics be applied. For the latter **Sims** recommended the use of chloride of zinc (300 grains to one ounce). Tampons of cotton squeezed as dry as possible out of this solution are packed into the cavity, and below them other tampons moistened with a solution of bicarbonate of soda are placed to prevent the caustic injuring the vagina. The pledgets should all be removed at the end of twenty-four hours, and the vagina douched thoroughly with an antiseptic solution two or three times a day until the slough caused by the caustic separates and comes away, which occurs in a week or ten days. The resulting slough usually comes away in the shape of a cast of the cavity where the application was made, and leaves a clean granulating surface lining the excavation. Some fever is likely to occur while the slough is forming, but the febrile action usually subsides promptly with the separation of the slough. The **Paquelin** cautery is the best instrument to use for applying the actual cautery, and its use should be followed by the same antiseptic treatment as in cases where the caustic is used. By the use of the curette, followed either by cautery or caustics, the hemorrhage is controlled with certainty and the discharge ceases to be offensive until sufficient time has elapsed for fresh portions of the growth to die and become putrid. The fever caused by this sloughing material will also abate and not return until more septic absorption occurs from the death of a new portion of the tumor. Patients will often experience great temporary benefit from this operation, gaining markedly in weight, strength and general health, and by repeating it when occasion requires, the lives of many patients can be prolonged in comparative comfort.

As illustrating an uncommon method of palliative treatment, and yet one that in this instance has proved effective in the prolongation of the life of the patient, I will briefly narrate the case of **Mrs. I.**, on whom I operated on January 12, of the present year. She had a tumor of the uterus which felt like a rapid growing soft myoma of about the size of two fists. On account of often recurring hemorrhage over a period of about three months, I decided to remove the uterus by the abdominal method. Owing to a continued rise of temperature and a cachectic appearance of the patient, which were of recent development, malignancy was suspected and the relatives of the patient so informed. This proved to be a wise provision, as on opening the abdomen and separating adhesions of the omentum to the tumor, its friable wall was broken into and the soft sarcomatous material exuding quickly demonstrated its character. With this soft broken down material also appeared lumps of feces, indicating a communication with the colon. Further examination showed the communication to occur just above the sigmoid flexure. I then determined to resect the bowel and make an end-to-end anastomosis after removal of the tumor, but on endeavoring to break up other adhesions I found it impossible to remove the mass, as it was also intimately adherent to a mass of small intestines. The embarrassing condition of affairs was also complicated by another opening, which appeared as a result of the breaking up of adhesions discovered in the bowel at the lower side of the tumor, just above the rectum. The cure of the patient by the removal of the tumor being impossible the palliative course was decided upon and the operation completed as follows: The tumor was torn freely open up to the junction with the margin of the healthy descending colon and its contents completely scooped out with the fingers and curette, and the cavity washed copiously with sterilized water after which the open end of the colon and opening into the tumor were stitched to the lower angle of the abdominal incision, a wall of iodoform gauze was then made around the entire mass, extending from the bottom of the pelvis up to and outside of the abdomen, and the operation completed by drawing the upper part of the wound together with silkworm-gut sutures. The recovery of the patient was, of course, slow, but it was uninterrupted, and she left the hospital, four weeks after the operation, free from fever and pain, and able to walk. She is now—five months after the operation—enjoying as good health as is compatible with the presence of the artificial anus, has gained some in flesh, is in good spirits, the tumor is increasing in size very little, if any, and gives no pain. Whatever your or my ideas may be as to the value of life under these conditions, the fact remains that for the results in this case I have received more expressions of gratitude from the large family of this beloved mother for thus prolonging her life than for any other operation giving perfect results that I ever performed, and the example in this case will ever incite me to similar action in cases that are beyond cure.

To *diminish the offensiveness of the discharge*, the use of the curette, cautery, and caustics, as before mentioned, are very efficient. Other applications, however, must be used, and probably the first in usefulness is the peroxide of hydrogen. I know of no antiseptic that will so quickly and completely deodorize and destroy foul-smelling, septic discharges, without injury to surrounding tissues, as this preparation. If applied directly to the diseased surface it may be used full strength once or twice a day; when used as an injection it is usually diluted about one-half with water. Injections of iodine water (two drachms of the tincture to one pint) two or three times a day may be used; or, carbolic acid (two drachms to one pint) in the same manner. Pure chromic or nitric acid may be applied directly to the ulcerating surface, care being taken to protect the surrounding healthy parts from the action of this agent, and washing the excess carefully away after the application.

To relieve pain, local application in the form of suppository may be made, the medication usually consisting of morphia, hyoscyamus, belladonna, cannabis indica, et cetera.

In concluding these brief remarks on palliative treatment of uterine malignancy I want to emphatically urge upon the general practitioner the fact that there is a *prophylaxis* to be used against this treatment—a preventive to be applied in place of, and to prevent, this living death in our patients, which we call palliative treatment. This is *early diagnosis*, first (and this you can do), and, second, *speedy removal of the diseased uterus.* I speak to the general practitioner on this subject because in the majority of cases he is the one first consulted by these patients, and it is his advice that they will most surely follow. Remember that after the disease has once started every day is precious to your patient. Delay means death. If you have any doubt whatever about your diagnosis of a suspected case, send her immediately to some specialist who, by his constant familiarity with the disease, will be able to settle the question. If you occasionally make a mistake and suspect a case of lacerated cervix for cancer, it is no discredit to you. You might better make any number of such errors than *one* the other way.

OSTEOMYELITIS.*

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Acute osteomyelitis is, as you all know, a disease inflammatory in nature and of microbic origin, involving the soft tissues composing the medullary substance of the bones. It is a disease which, for anatomical and physiological reasons, is more frequent among children and young adults than in later life. There are some anatomical facts in relation to the marrow of the long bones that will bear my bringing them before you, in order to show you the ease with which this infective process can be started in children. The capillaries that become the blood channels in the medullary substance, upon entering the marrow, at once enlarge into channels or blood-vessels about four times their original calibre. This fact causes the blood to be very much slowed in its progress after it enters the medullary canal. It is hardly necessary to explain this, as it is well-known in mechanics that given the same force, the speed of a fluid passing through a cylinder is in proportion to the size of the cylinder through which it passes, and a force which would maintain a certain velocity in a fluid passing through a small vessel would not allow of the same amount of velocity in a larger vessel. The blood current, then, once entering and passing through the large soft medullary vessels is slowed down considerably. Owing to the reasons above stated, and to the fact that there is scarcely any tension or resistance in the coats of the blood channels in children, and also for the reason that in children, where ossification is not completed at the epiphysial junctions, there is a lack of development in the capillary vessels in the part; it is quite evident why the marrow of the long bones and especially the epiphysial lines in children ought to offer the *locus minoris resistentiæ* to the deposition of pus-forming germs in these particular localities.

As I have remarked in the above, this disease is of an infectious nature and consequently is due to some microörganism. As yet, no peculiar germ has been found to be the promoting factor in the causation of the disease. Microbes that are always present and found in abundant quantities in abscesses and furuncles are here found with the same constant persistency and in relatively large numbers. The staphylococcus pyogenes aureus, the staphylococcus pyogenes albus, and occasionally the streptococcus, always pus-formers and always present in pus, are the only bacteria which have ever been discovered in the pus of an acute case of osteomyelitis. Encased as the marrow is in a strong, bony envelope, with only vascular communication with parts exterior to the medullary cavity, it is sometimes hard to determine the route by which the infection gains ingress and starts the disease. But, experimenters have shown that the germs are carried into the interior cavities of the long bones by way of the blood-vessels and the lymphatics, and here meeting with conditions extremely favorable to their deposition and rapid development, and not finding the vital resistance obtaining elsewhere, the disease is promptly inaugurated. Outside of the germ cause in the production of this disease, we have many other predisposing and exciting causes. A sudden exposure to cold, particularly in the case of boys; a strumous diathesis, a syphilitic taint, may render the medulla favorable to the commencement of the disease. Osteomyelitis is of quite frequent occurrence directly after convalescence from one of the debilitating fevers, such as typhoid, scarlatina, diphtheria, et cetera. The whole system, by one of these diseases, is left in a devitalized condition and the medullary substance being less vital even in health than other portions of the anatomy, becomes the place of least resistance and the disease supervenes. Sometimes the inflammatory condition is secondary to a collection of pus at a remote anatomical position. For instance, a carbuncle or a boil on the back of the neck has been known to be followed by osteomyelitis, in such a manner as to stand in the relation of cause to effect. Some of the pus microbes or their products, or both, are conveyed by the vascular fluid and deposited in the walls of the vessels in the marrow and this is followed by a rekindling of the disease in that location, when it becomes a case of osteomyelitis. In adult cases, trauma is by far the most powerful factor and frequent cause in producing the disease. Even a subcutaneous fracture, by exposing the medullary substance to infection, may be the cause of the disease. Germs may be carried from the intestinal tract, from the mucous membrane of the respiratory passages, or of the mouth, to the site of the injury and here begin to manifest their virulence, having for their field of action a wounded and debilitated mass of tissue and meeting with more numerous chances of ingress. Much more frequently does this disease follow compound fractures, for obvious reasons; the fractured locality being composed of badly mutilated and subsequently disorganized tissue and freely exposed to the air and contact with foreign and germ-laden bodies. The cause of the disease, in each individual case, greatly modifies the pathological conditions, the symptomatology, the treatment and the prognosis. In cases of so-called idiopathic osteomyelitis, we have the following line of symptoms:

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* Read before the Detroit Academy of Medicine.

About the first symptom to be noticed is deep-seated, excruciating pain, constant and boring in nature, but not at this stage affected in any way by pressure. Tenderness on pressure comes on later in the disease, when periostitis, secondary to the osteomyelitis, develops as a complication. This is of great importance as a differential diagnostic sign between osteomyelitis and primary periostitis. In primary periostitis the symptoms of pain, swelling, redness and particularly tenderness on pressure, manifest themselves at the very outset of the disease. In osteomyelitis, we have a suppurative disease in the interior of the bone and pain follows from pressure due to the accumulation of the inflammatory and suppurative products in large quantities, retained within an unyielding, firm, thick, bony case. No amount of pressure or applied force, unless it be of a jarring nature, is capable of eliciting signs of tenderness over the affected area; so then, if we have a deep-seated pain within a long bone, which does not show any tenderness on pressure, we should be on the lookout for a commencing osteomyelitis. But if tenderness is a prominent symptom at the outset, we are more liable to have a case of periostitis. Swelling, one of the symptoms of inflammation anywhere, does not show until after the bony tissue has become sufficiently necrosed to allow the products of suppuration to exude into the surrounding tissues. Then swelling, at first of an edematous character, but later of the phlegmonous type, rapidly increases and is then a prominent symptom. A joint in proximity to the diseased portion may take on a synovitis, which may at first be simply serous in character but afterwards suppurative. This complication may occur irrespective of whether or not perforation has taken place in the long bone. The germs causing the osteomyelitis may be carried by the circulation and deposited in the joint, there setting up a suppurative synovitis, very dangerous to life and destructive of the future utility of the articulation. Long before this has taken place and generally at the very start of the disease, a certain marked inability to move the limb or to use the muscles concerned in movements of the limb is noticed. This inability is generally as pronounced as if the bone were fractured instead of the marrow being diseased. When the inflammatory exudations have degenerated the overlying bone to such an extent that its integrity is lost and the pus and other products begin to leave the medullary cavity and infiltrate the tissues above the bone, the pain which is, as said before, a symptom of pressure, suddenly ceases and great relief is at once experienced. In children, the necrotic process destined to liberate the retained products, takes place in the epiphysial line and we sometimes have, as a grave result, a thorough and complete destruction of the epiphysial structure and consequently a solution of the continuity of the bone, making a complete fracture and one which forever after prevents the proper nutritive changes of growth from taking place, and, if the patient is fortunate enough to recover, he generally does so with the prospect of a shortened and deformed limb.

A case of osteomyelitis is always one of the most grave of surgical affections and demands, for its successful treatment, an early diagnosis and prompt surgical measures. The disease may be so virulent in character that the toxins formed so abundantly and suddenly may overwhelm the system, bringing about a rapidly fatal septicemia. In cases of early fatal results, this is generally the way in which death is produced. The germs multiplying with wonderful rapidity, the disorganizing processes taking place with such instantaneousness, and the pus being formed in such large quantities and the poisons developed with such virulency, it is no wonder that the feeble efforts of the circulation to carry off these products and cause their elimination is inadequate, and that the system suffers such shock from fever and toxemia that the patient has no chance to rally. If the patient do not succumb previous to perforation or some operative procedure in his behalf, we may have metastatic abscesses and a general condition of pyemia which may in turn cause his death. If we have pain coming on suddenly, located in the interior of a bone, either preceded or followed by a chill and a rapid rise of temperature, we can generally diagnose the condition and the demand for a surgical operation is imperative, so much so, that time should not be lost in trephining the bone over the diseased area into the medullary cavity and at once instituting free drainage. Where this is not done early, extensive disease of the bone may take place by first perforation and then a maceration of the osseous tissue in a fluid composed of pus and detritus. In some cases a complete destruction of the entire periosteum surrounding the shaft of a long bone has been noticed. Sometimes the bone itself becomes so thoroughly softened and necrosed that it is forever beyond repair. Large abscesses may form and dissect the muscles by following the fasciæ and intermuscular septa. Generally, however, when the disease has reached this stage, it is so apparently fit for a surgical operation, that free incision and evacuation are made use of and fortunately are usually of the highest efficacy. In an ordinary case of osteomyelitis, before perforations have taken place or grave complications supervened, it is only necessary to trephine the bone, remove the diseased tissue around the opening, irrigate the wound and establish drainage, to perfect a cure. It often happens that we have multiple osteomyelitis, where the same pathological processes occur simultaneously in several long bones, or, occur successively from reinfection of other bones from the first diseased marrow. Multiple osteomyelitis is a much graver affection than the simple variety, because there is a greater chance for systemic intoxication by the poisons.

It very often happens, where the disease is not treated early, that we have a necrotic condition of the bony tissue, with a suppurative periostitis, which finally produces an abscess and drains through an opening in the skin. The periosteum in these cases, although extensively diseased, is not entirely destroyed and nature makes an effort, by means of the periosteum, to throw out new bone and cause a repair of the tissues that the disease had broken down. In this manner, a new envelope or bony covering is sometimes formed over the whole surface of the diseased bone and this is technically called an involucrum. The interior of the involucrum is generally filled with a mass of dead bone. Sometimes the process of solution of the bone has been so great that only fragments or irregularly shaped masses of dead bone remain within the involucrum. These are called sequestra. Where the periosteum has been destroyed in certain portions, the involucrum is deficient at those points and consequently openings from the lack of formation of bony tissue are left. These openings allow of free communication between the interior of the involucrum and the spaces exterior to it and drainage is maintained through these openings whereby, finally, the diseased products reach an exit through some opening in the skin, the former site of the rupture of the abscess cavity. Surgeons often fail to detect or determine the extent of the disease by probing through the superficial openings, as the openings in the involucrum are very rarely situated directly beneath the external sinus. These openings in the involucrum are technically called cloacæ. Now, if we find a case of long duration which has come to us after the abscess has drained through the skin spontaneously, it is of no avail to simply probe the opening or even to make an opening through the involucrum at this point. It is the part of good surgery to make sufficient apertures through the involucrum, by means of chiseling or trephining, so that the sequestra or pieces of dead bone may be expeditiously removed. All dead bone is a menace to the future health of the patient and should be sought for diligently by a thorough operative procedure.

PERSONAL RECOLLECTIONS OF SOME OF THE OLDER PHYSICIANS OF DETROIT, AND OF CHANGES OF MEDICAL THEORIES.*

By E. P. CHRISTIAN, M. D., WYANDOTTE, MICHIGAN.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

It is probable that there is no member of the medical profession in this city whose knowledge of its earlier representatives extends back to those of an earlier date than my own; for though there are several, my seniors both in age and in practice, yet I believe that all of them came to Detroit at a much later period.

Coming to Detroit, as a lad, during the territorial stage of existence of the subsequent state of Michigan; when Detroit contained possibly between three and four thousand souls, and these largely of French nationality; when the Territory had acquired sufficient population to entitle her, under the then congressional apportionment, to a congressman and to statehood, and this population largely centered about the old military posts and fur-trading stations along the frontiers; though young, I gained some acquaintance with a generation of doctors antedating any medical organization in the city, all of whom have many years since passed away.

Among these physicians of territorial days I particularly desire to mention with loving regard and appreciation of his professional skill and standing, DOCTOR R. S. RICE, who was associated with DOCTOR ZINA PITCHER, after locating here on his retirement from the army subsequent to the Seminole war, which occurred at a later date, and also subsequently associated with DOCTOR MORSE STUART, a still later arrival. My acquaintance with DOCTOR RICE at an early period was intimate, although then young, by reason of the fact that he was chosen as the family physician by my father soon after his arrival, and the doctor continued that relationship to the time of his death sometime in the later fifties, or early sixties, and whom, in that relationship, the family had great reason to hold in loving remembrance.

DOCTOR ZINA PITCHER, though well known to me, as he must have become to all the inhabitants, young and old, from very soon after taking up his residence here, I became more intimately acquainted with during my stay at Ann Arbor from 1843 to 1847, at which time he was a regent of the University and took a very great interest in it and in any one connected with it. DOCTOR PITCHER, from his first residence here, became very prominent in all public matters, occupying various official positions. Subsequently, after I commenced the study of medicine in the office of DOCTOR MORSE STUART in the fall of 1847, I received almost daily clinical instruction at Saint Mary's Hospital from DOCTOR PITCHER who was in medical charge, and thus became most intimately acquainted with him, to whom I owe much for the benefits of this attendance at Saint Mary's continued not only through my undergraduate time of study in my preceptor's office, but for a good while after.

My acquaintance and familiarity with the then active members of the profession rapidly extended and enlarged soon after commencing systematically my medical studies in DOCTOR STUART's office. Among other prominent physicians at that time was DOCTOR RUSSELL, my juvenile octogenarian friend, still living among us hale and hearty, but not for some years in practice, and probably not quite so agile as when nearly fifty years ago he used to run nimbly up the three pairs of stairs to the fourth floor of the old Cooper block, upon the site of which now stands the A. C. McGraw building, to a small back room where he was wont to make demonstrations on the cadaver to us students.

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*Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

There was also Doctor Adrian R. Terry, a prominent surgeon, at one time associated with Doctor Russell, and who went out as a regimental surgeon in the Mexican war about 1846.

After the return of our troops from Mexico, about 1847, there was also Doctor Chas. S. Triples, surgeon of the regular army. The army barracks were located at that time a long way out of town, about where the House of Correction stands, as near as I can recollect, and as I visited the hospital at these barracks very regularly to see the sick veterans I have a distinct remembrance of the walk being a long one, especially on a hot summer day.

There were at the time I commenced the study of medicine in this city, in the fall of 1849, including myself, a half dozen young men in the same pursuit. These, like nearly all the physicians of that time, have long since passed away. Among them I will mention two of my intimate companions. One was Lew Davenport, as he was familiarly known, my associate in studies and lectures, and who entered upon practice in this city the same year as myself. He was a relative of Doctor Russell, and was known as Doctor Lewis Davenport. The other was James Ives, a brother of the late Lewis Ives, artist, and uncle to Doctor Augustus Ives, and of the artist, Percy Ives, of this city. He, however, did not complete his medical studies to enter upon practice. We decided that it was of prime importance, and that there would be lots of fun in commencing the practical study of anatomy at once, and that we would commence with first principles, that is, would secure our own subject. The opportunity for the study of practical anatomy to those not in attendance upon lectures at the schools was, in those early days, embarrassed with more difficulty than at present. However, for those anxious to begin, a way may always be found, and the opportunity was not long in presenting. An unknown stranger, after a debauch, died suddenly in the street; the inquest could elicit no information regarding his personality, who and where were his relatives, friends, et cetera. He was buried by the city in the potter's field, a portion of the old Russell street cemetery, which was then way out in the country. The *proceeding* was observed and the *spot* located and marked by one who happened incidentally to be on the ground, possibly looking for the grave of some friend. That night the debauchee became our subject. He was buried, as they say in the west, with his boots on, and not only that, he died with all his clothes on, so that barring the difficulty of moving and lifting the more than two hundred pound weight, there was nothing to militate against one person holding the body upright in the buggy while another drove the horse. As this buggy was driven down Woodward avenue past the National Hotel, which stood where now stands the Russell House—which latter I may mention belongs to the estate of one of those old-time doctors, E. M. Clark, who had a large practice, and with whom Doctor Jas. A. Brown was associated, and who was also a leading practitioner,—and as we arrived nearly opposite the doors, there began to swarm out the guests from a large and fashionable ball which had been held there that night and was just now breaking up. In those days such parties were mostly held in the dining rooms of the large hotels; and the National was among the leading hostelries. However, no attention was paid to the vehicle or its load, and no time was lost in driving to the building, in carrying our subject up stairs into the office, and secreting it in a closet before some of the participants of that party might happen past on the way home. As yet no consideration was had in regard to hiring a room for dissecting uses. The next day a room was hired in the building previously mentioned, the cadaver boxed up and with sufficient furniture carted to it, and then night after night, by the light of tallow candles, the study of anatomy was prosecuted, and demonstrations in the grosser anatomy and of surgical operations made to us by some one of these medical men whom I have named, or some other of the physicians of the city. Each night the refuse was carried to the river and fed to the fishes. It is probable that none of those in the stores or offices in the block knew for what purpose the room on the fourth floor was being used.

Our next course of home anatomical studies was not begun until the winter of 1849–50, as during the previous winter some of us were away at lectures and others had dropped out of the procession. But EDMUND ANDREWS, the since well-known professor in Chicago medical colleges, distinguished member of the profession, and surgeon in that city, was added to our home class. Our subject was in marked contrast to the previous one which was remarkable for his great accumulation of adipose tissue, weighing certainly over two hundred pounds. This one was a mere skeleton. He was one of the returned veterans of the Mexican war, who had succumbed at the military barracks from diarrhea acquired in Mexico, and said to have been caused mainly by our soldiers' staple diet of beans, and from which many died. GENERAL WOOL said that more of our men were killed by beans than by bullets. In fact these returned men at the barracks continued dropping away from this cause for a long while after their return home.

In those days not only was the prosecution of medical studies at home fraught with difficulties, but attendance upon lectures at eastern colleges was even more so. Before railroads had penetrated as far west as this city, after the close of navigation, from November to April, we were isolated and had communication with the east during this time only by the tedious and uncomfortable mode of travel by stage-coach. In the spring of 1849 the return from Cleveland was made in this way occupying more than fifty hours of continuous travel in very cold weather. In the late winter of 1852 the journey from Niagara Falls to Windsor was made in this same manner, with continuous staging for over sixty hours, in zero weather.

To contemplate the few remaining of the physicians of those days, RUSSELL, STUART, KLEIN, KIEFFER and the long catalogue of those who were then in practice, or have since entered upon practice in this city and have passed away, is calculated to make one feel lonesome and that he ought to apologize for being alive. Let me mention a few from memory: PITCHER, RICE, TERRY, STEBBINS (father and son)—the latter in the army during the war of the rebellion, the COBBS (father and son), CLARK, BROWN and son, HENDERSON, ROBINSON, INGLIS, TERRY, DAVENPORT, LYSTER, BRODIE, PALMER of Michigan University, and GUNN. Most of these names, though not all, and many more who have disappeared, nearly all of them dead, are names of men who appeared at the meetings of the

Detroit Medical Society which was established in 1853 and lived until 1858, nearly five years. The proceedings of this society appear in *The Peninsular Medical Journal* published in Detroit from 1853 to 1858. The proceedings of the antebellum State Medical Society also appear in this journal. There was an older medical society in Detroit called, I think, the **Sydenham**, which existed in the later forties. Its records should be somewhere in this city. These all were mighty men of medicine in the former days.

So much, then, in brief, regarding the personality of some of the representative members of the profession in this city from nearly a half century ago until their modern successors have come on the stage with the advantages of more recent advances in knowledge and whatever practical benefits have originated from newer theories based upon newer discoveries and newer and better comprehension of facts and interpretation of phenomena of diseases and their causes. In brief, every step forward in knowledge has been the legitimate and orderly result of previous advances; and each successive step onward has been the necessary preparation for further progress and is the prophecy of still newer and greater advances. The present generally accepted theory of the microbic origin of infectious diseases, with all that this theory implies in the way of antiseptic surgery and medicine and prevention of diseases, is the outcome of necessary and orderly prior advances. The theory of zymosis as an explanation of contagious and infectious fevers, with subsequent immunity, was as necessary and logical a prior step in the evolution of the so-called microbic theory as was this theory of zymosis as an explanation of these facts.

Let us look back to the elaboration of the theory of zymosis, only a little more than forty years ago, and see how naturally and logically the microbic theory is evolved from it, for, as we now know, zymosis implies the presence and action of organisms, though something more. *The Peninsular Medical Journal* (1853) contains a review of a "Prize Essay on the Zymotic Theory of Essential Fevers and Other Disordered Conditions of the Blood," by **Professor Armor**, afterwards of the medical department of the University of Michigan. Says the reviewer:

"That there is in these diseases an admixture of deleterious matters he proves by the following facts:

(1) 'That diseases analagous to these fevers have been induced by injecting putrid matter into the veins of animals.

(2) 'Animal poisons introduced into the blood easily produce these fevers, small-pox, measles, et cetera.

(3) 'These poisons gain access to the blood through the medium of the air and by the lungs.

(4) 'The non-contagious fevers, as remittent and intermittent, depend upon a poisoned or changed state of the air.

(5) 'Observation shows that in essential or idiopathic fevers the blood is altered.'"

Not yet had the microscope revealed and differentiated these wonderfully minute organisms which have since been discovered in a constantly increasing number of diseases, and which have been cultivated and inoculation with the cultures found capable of producing specific diseases; yet he goes on to say:

"Not only is there toxemia or blood poisoning, but that is primarily so, and that the difference in phenomena is owing to the difference in that poison; that each specific miasm has its specific effects. This is accounted for by the author on the theory of zymosis as first elaborated by LIEBIG. 'The particular mode,' says the author, 'by which these abnormal changes are effected may remain obscured, as they are measurably hidden from us, but doubtless hereafter we shall be able to detect other mal-products and trace out certain phenomena as the result of their presence, with comparative certainty.'"

"The present age in medicine" [more than forty years ago] "is not engaged in inventing new hypotheses, or false theories, but is proceeding practically into things substantial, tangible, and real. The scalpel, the microscope, and the laboratory are active in a utilitarian search after tangible objects and materials."

Such were the words penned over forty years ago by the elaborator of the theory of zymosis as then applied to a limited number of essential fevers. We have seen the natural evolution from that theory, by the continually increasing and more accurate results of observation of the germ-genesis of a larger and steadily increasing number of not only essential fevers, but of various diseases. We have noted the different theories in explanation of the immediate causes of the diseased processes thus induced; of nature's modes of cure; of immunity, et cetera, up to the present status of our knowledge on the subject.

And now, forsooth, comes another Ann Arbor man, mark you, as the exponent of our present knowledge. Another man from that institution which, by the investigations and writings of such men as ARMOR, VAUGHAN, NOVY and the presently referred to writer, DOCTOR MCCLINTOCK, and others on this subject of germs, and therefore preventable diseases, has contributed to the state a million times more, even in pecuniary value, than she has received from its taxes. From a paper entitled "The Disease-Resisting Powers of the Body," read by DOCTOR CHARLES T. MCCLINTOCK before the Biological Society of the Chicago University, I quote his conclusions as follows:

"Now what have we learned from these theories and experiments? We have seen that the body has power to kill bacteria. That this power resides chiefly if not wholly in the soluble nucleins. On this fact is based nuclein therapy. We endeavor to aid the body when it is engaged in a losing fight by giving it a nuclein closely related to its own, which it can readily assimilate and in turn use as a defensive agent. We have seen that the body has a poison-destroying or antitoxic power; that we can increase this to an enormous extent in certain animals, and that we can borrow this power from one animal and lend it to another. On these facts serum therapy is based. We have seen that there are some reasons for believing that these germicidal and antitoxin powers are related; that in a strict sense there is no antitoxin, but only an immunizing substance; that the problems of cure and immunity are probably identical, and I trust that we have seen that nucleins and antitoxins are not chance discoveries but are results of the investigations of many workers. A theory here, an experiment there, step by step, until at last the bacteriologist offers to humanity the results of his labors."

I have quoted these extracts not only to show the present status of the inoculative theory, its evolution step by step up to this era of serum therapy, but also for the purpose of showing the similar train of thought suggested and the similar conclusions to those of **Doctor Armor** more than forty years ago. These are his concluding thoughts:

"We are learning better methods. Before attempting to find remedies, we study the etiology of a disease. Having found the cause, its noxious principles, the way in which it harms, we then endeavor to discover the agents with which the body combats the 'disease poison.' Then, and not until then, are we in a position to intelligently seek for remedies."

To those of us who have seen both these promises of forty years ago and their accurate and speedy fulfillment, it is not difficult to conceive that present realizations are but the prophecy of greater and speedier advances. And the application is not alone to medicine but to all the arts and to all branches of knowledge. Says **Thomas Cummerford Martin** in "Tesla's Oscillator and Other Inventions:"* "Frictional machine, Leyden jar, coil, battery, magnet, dynamo, oscillator—these are but the steps in a process as regular and well-defined as those which take us from the aboriginal cradling of gold out of river sands up to the refining of ore with all the appliances of modern mechanism and chemistry."

With this method, medicine seems to be entering on a new day.

"All our explanations are but half-way houses to the ultimate facts." (**Hicks.**)

For two hundred years the law of gravitation discovered by **Newton** has been regarded as an ultimate fact. What if it shall appear that even this must give place to laws of electro-magnetic force? It begins to look that way. **Kepler**, nearly a hundred years before **Newton**, supposed that the curvature of the paths of the planets depended upon the attraction of the sun, but believed it to be magnetic attraction.

For how long has the pure abstraction known as the *vis medicatrix naturæ* served to express an ultimate truth so far as was known? and yet we now think we begin to comprehend, in some measure, in what this *vis medicatrix* consists, as in the physiological functions of the white corpuscles of the blood; and in the conservative action of the pathogenous microbic toxins generated in the system, which become destructive to the organisms by reason that no organization can continue long to exist in its own excretions or destructive products. Still, though always approximating, we never arrive at the goal of ultimate truth.

THE EXPERIENCE OF SEVERAL PHYSICIANS WITH DIPHTHERIA ANTITOXIN.†

I.—By HERBERT M. KING, M. D., Grand Rapids, Michigan.

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Through the munificence of **Mr. Edward Lowe**, early in January last, two hundred dollars was placed at the disposal of a committee to be appointed by **Doctor Eugene Boise**, for the purchase of diphtheria antitoxin, the same to be kept at Butterworth Hospital and under the control of the aforesaid committee, for distribution to the physicians of Grand Rapids who desired to use it in the treatment of diphtheria. **Doctor Boise** asked **Doctors J. B. Whinery, B. S.**

**The Century Magazine*, April, 1895.

†Read before the Grand Rapids Academy of Medicine.

CREBS, and HERBERT M. KING to serve on such committee, and in due time to report to the Grand Rapids Academy of Medicine, the success met with in the use of the antitoxin. A few other physicians besides the members of the committee have availed themselves of the opportunity so generously offered by MR. LOWE, and in order to secure a greater variety of opinion their experience will be given. The antitoxin so far used has been the BEHRING product. The first invoice was secured and directly imported through relations with our foreign diplomatic service; since then it has always been possible to secure it through the American agency in New York.

The following is a brief report of cases treated with diphtheria antitoxin by DOCTORS J. B. WHINERY, B. S. CREBS, and myself at the Children's Home, supplemented by the experience of DOCTOR R. H. SPENCER.

* * *

Case I.—A female infant; aged eighteen months. Some time before developing symptoms of the disease the infant had been removed from the institution and it is presumed that while absent she was subjected to the infection as the first symptoms appeared nine days after her return. DOCTOR WHINERY first saw the case January 27 and noticed the pseudomembrane involving at that time the tonsils only. According to previous agreement we saw the case together in the afternoon of the same day, and while the local appearances justified a diagnosis of diphtheria, yet it was decided to make a cover-glass preparation and inoculate a culture tube, which was accordingly done.

The temperature on the evening of January 27 was 102.8°; pulse 130; respiration somewhat labored. Four two-grain powders of hydrargyrum cum creta were given at intervals of half an hour, and the throat was frequently swabbed with DOBELL'S solution during the night. Examination of the cover-glass preparation discovered the KLEBS–LOEFFLER bacillus in almost pure culture. It was, however, decided to delay the administration of antitoxin until the following morning.

January 28—10 A. M.: Present—DOCTOR J. B. WHINERY, DOCTOR B. S. CREBS, and myself. The patient's temperature was 102.6°; pulse 130; respiration 30, somewhat labored. Nine cubic centimetres of BEHRING'S antitoxin (number one) was injected into the subcutaneous tissue below the axilla. In the evening of the same day the temperature reached 103.8°; pulse 148; respiration 32, irregular and labored. Inhalations of steam were given constantly through the night. At 11 P. M. it was decided to administer more antitoxin. Accordingly ten cubic centimetres of BEHRING'S antitoxin (number two) was injected in the back and breast.

January 29: At 1 A. M. the temperature registered 102°, and the pulse was 148. At 4 A. M. there was a rise in temperature to 103° and a lowering of the pulse-rate to 130. At 6 and 10 A. M. the temperature remained at 103° but the pulse had increased to 160. Strychnia, one-sixtieth grain, had been administered every two hours from the evening of January 28. A nutritive enema was given in the forenoon but was not retained.

January 29—noon: Temperature 103.4°; pulse 158. At 4 P. M.: Temperature 104.2°; pulse 160. The inhalations of steam were continued until nearly 7 P. M., milk and brandy were allowed at short intervals, and the patient at no time refused nourishment. At 7 P. M. the temperature was 105.4°; pulse 130;

respiration 45. The pulse now became weak and fluttering. Convulsions supervening, the first occurred at 7:40. There were five in all, each lasting two or three minutes, the final one occurring at 11 P. M., in which death ensued.

Case II.—A female child, eight years of age. Suspicious patches were first discovered in the throat on the morning of January 29. Temperature 102.8°; pulse 114. The child was isolated and mild antiseptics were employed to clean the throat. Brandy and milk were administered every three hours. BEHRING's antitoxin (number one) was injected at 10 A. M.

January 30: Temperature 100°; pulse 100. The membrane had now extended over both tonsils and involved the lower portion of the soft palate. The glands at the angle of the jaw were somewhat indurated. A cover-glass preparation taken the day before having demonstrated the presence of the specific bacillus, and the membrane having extended ten cubic centimetres, BEHRING's antitoxin (number two) was injected at 10 A. M. At 12 noon the temperature registered 99.4°, and the pulse was 104. At 4 P. M. the temperature had risen to 100.4°, and the pulse-rate had decreased to 100. At 8 P. M. the temperature had fallen to 100°, and there was a still greater decrease in the pulse to 94. From this time on, the patient continued to improve uninterruptedly. Milk and brandy were allowed at intervals, increasing them as convalescence progressed, locally DOBELL's solution and yeast nuclein solution were employed in spray as often as necessary, one-sixtieth grain of strychnine was given at intervals of three hours, and the patient was discharged cured on February 4, the pulse and temperature having remained normal for two days and all local conditions presenting a normal appearance.

Case III.—A female child, aged about nine years. In the afternoon of January 31, we discovered a suspicious membrane appearing on the right tonsil, extending upward to and slightly involving the soft palate. A cover-glass preparation disclosed the characteristic bacillus present. At 8 P. M. the temperature registered 99° and the pulse was 84. BEHRING's antitoxin (number one) was injected at 9 P. M.

At 12 midnight	the temperature was 102.2°;	pulse 104.
February 1—3 A. M.	the temperature was 101.8°;	pulse 106.
February 1—6:30 A. M.	the temperature was 103°;	pulse 112.
At noon - -	the temperature was 102.6°;	pulse 122.
At 6 P. M. - -	the temperature was 102°;	pulse 114.
February 2—5 A. M.	the temperature was 100°;	pulse 94.
February 2—noon	the temperature was 99°;	pulse 86.

The temperature rose in the afternoon again to 102.8° and the patient complained of considerable headache. Five grains of quinine were given at 6 o'clock and the dose was repeated at 9 P. M. The temperature subsided rapidly and all pain disappeared.

February 3—7 A. M.: The temperature registered 99.6°; the pulse was 92. From this time convalescence was uninterrupted, and the case was discharged February 14, having been entirely normal for several days. The general treatment in this case was similar to that reported in the record of the last case: Strychnine, one-sixtieth grain, every three or four hours; milk and brandy every three hours while the pulse was weak and soft; and nourishing diet. Locally, DOBELL's solution and nuclein solution were used as sprays at intervals of from two to six hours.

Case IV.—A woman, aged forty-five years. I first saw this patient about 2 o'clock in the afternoon of March 9. Her temperature was 101°; pulse 100. Symptoms: Sore throat; more difficulty in swallowing fluids than solids; some swelling of the lymphatics at the angle of the jaw; the tonsils were swollen and the mucosa was very hyperemic. On the left tonsil appeared a characteristic pseudomembrane. I isolated the case and deferred prescribing (except to order a spray of DOBELL's solution) until DOCTOR J. B. WHINERY could be present; meanwhile inoculating a culture and making a cover-glass preparation. We saw the case together at 6 P. M., having examined the cover-glass preparation in the meantime and found it of suspicious appearance, but not positively diagnostic. The temperature at 6 P. M. was 100.2°; pulse 100. The appearance in the throat was much improved and the question of diagnosis was therefore still further obscured. It was, however, decided to inject antitoxin, and accordingly ten cubic centimetres of BEHRING's antitoxin (number two) were administered. DOBELL's solution was sprayed into the throat at short intervals through the night.

March 10: The temperature and pulse were normal at noon, the membrane had entirely disappeared from the tonsil, and the hyperemia of the mucosa was greatly reduced; in fact we had about decided that the case was not true diphtheria. At the end of twenty-four hours, however, the culture was examined and proved to be a perfectly pure culture of the specific KLEBS–LOEFFLER bacillus. It was therefore impossible to doubt the true nature of the attack in this case, notwithstanding the brief illness and the sudden convalescence—which was uninterrupted.

In none of the cases above reported did we meet with any paralyses. Convalescence was perfect, and so far we have been unable to detect a single untoward effect of the remedy. To what degree antitoxin is effective in those cases complicated by a multiplicity of infection such as sepsis, et cetera, we are not prepared to say from personal experience. As none of the cases reported were much complicated DOCTOR SPENCER will report a case in which there seemed to be considerable septic infection and yet made quick recovery. It cannot, however, be expected that a specific which, from the very nature of its production is exclusive and eminently selective in its action, can exercise a like influence upon all pathogenic germs or their toxins.

* * *

II.—BY R. H. SPENCER, M. D., GRAND RAPIDS, MICHIGAN.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

SO MUCH has been said and written about the use of antitoxin that I believe it is the duty of all physicians, who have employed the new remedy, to put on record what they have learned about it by personal experience. I have used it in two cases to immunize, and in four cases where diphtheria was actually present, and with the best results as the following report will show.

I was called, on March 8, 1895, to the family of a Swede, named P. L. Four members of the family were sick with sore throat, namely, the wife, aged thirty-one years; three children, aged respectively nine, six, and four years.

*Read before the GRAND RAPIDS ACADEMY OF MEDICINE.

Examination revealed that they were suffering from diphtheria of a malignant type which was manifested by extensive glandular swelling. The two oldest children had membrane over the tonsils, soft palate, and well into the nose, with bloody serum oozing from the nostrils as they breathed. In fact they were as bad cases as I have ever seen, and I have been through several severe epidemics. Two of the children had been sick three days, and the mother and one child two days. Temperature ranged from 103° to 103.6°. DOCTOR HERBERT M. KING, of this city, was called to make the pathological examination, and he confirmed my diagnosis. DOCTOR BRADFIELD, city health officer, also saw them and pronounced them as malignant cases as he had seen in a long time.

Treatment.—With the assistance of DOCTOR KING I injected ten cubic centimetres of BEHRING'S antitoxin subcutaneously into each of the four patients, using solution number three for the two oldest children, and solution number two for the mother and youngest child. The remedy was introduced over the buttock and all aseptic precautions were observed. This was done at 4 P. M. on March 9. The only other treatment employed was spraying with one to three of peroxide of hydrogen and giving tincture of iron in doses suitable to the ages of the patients. Strychnia was likewise administered. At my next visit the following morning, the patients were all much better, the highest temperature in any case being 101°. The cases progressed to uninterrupted recovery, the throat and nose being clear within six days, and all were discharged cured on March 20, ten days after receiving the antitoxin.

On April 28, having been called to see another member of this family, my attention was called to the oldest child whose case is reported above. I found that for two weeks past she had complained of double vision and had not full control of the muscles of deglutition so that sometimes liquids would regurgitate through the nose. In taking the reflex at ligamentum patellæ it was found to be almost nil. The patient was placed on a tonic—strychnia—and at this writing all symptoms are improved, though there is still double vision and tendency to divergent strabismus. These latter symptoms are interesting from the fact that BEHRING has held that paralysis did not follow the use of antitoxin, which the result in this case would seem to contradict.

The cases cited at the beginning of this report, in which I had used antitoxin to immunize, were both infants under one year. One of them being in the family mentioned above, the other in a family where the mother was having diphtheria, and in a family where two children had died with the disease. Two weeks previously, five cubic centimetres of serum were used in each of these cases and neither of them developed the disease. It will be seen by the cases reported that my experience has been such as to lead me to continue the use of so valuable a remedy.

* * *

III.—BY B. S. CREBS, M. D., GRAND RAPIDS, MICHIGAN.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

Case I.—On the morning of January 28 the three young children in the ward where the infant had been were each given one-fourth bottle of BEHRING'S antitoxin (number one) to render them immune. The nurse in charge, aged thirty-eight years, complained of a sore throat, but nothing more than a redness was observed. In the evening of the same day two small patches were observed on either tonsil, and a microscopical examination showed the presence of the KLEBS–LOEFFLER bacillus. About midnight a bottle of BEHRING'S antitoxin (number one) was administered between the scapulæ. The temperature registered 101.8°; pulse 75.

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* Read before the GRAND RAPIDS ACADEMY OF MEDICINE.

On January 29 there was but little increase in the amount of membrane and the patient was feeling comfortable. The highest temperature during the day was 100.8°; corresponding pulse 100.

On January 30 the throat began to clear up. The temperature and pulse fell to nearly normal.

On January 31 no membrane was present.

The local treatment in this case consisted of the application of peroxide or hydrogen.

Case II.—January 30, a female child, aged ten years, complained of sore throat. Examination revealed a small grayish deposit on right tonsil. A swab was taken and examined, and the KLEBS–LOEFFLER bacilli were found. In the afternoon of the same day DOCTOR KING injected a bottle of BEHRING'S antitoxin (number one). The temperature at this time was 100.4°; pulse 88. At 8 P. M. the temperature registered 103.4°, and the pulse was 104. The membrane was still confined to the right tonsil, covering an area two-thirds the size of a ten-cent piece. I ordered stimulants of brandy and strychnia. Locally, DOBELL'S solution.

On January 31 there was very little change in the condition of the patient. The membrane had not spread to any appreciable extent. The second bottle of antitoxin (number one) was administered.

February 1: Condition improved. Temperature lower; pulse better; evidences of detachment of membrane.

February 2: Temperature fell to normal and throat almost clear of membrane. From this time on the child made an uninterrupted recovery.

Case III.—On February 3, a female child, aged ten years, had symptoms of sore throat. Examination revealed greatly enlarged tonsils in a congested condition. Microscopical examination of contents on swab taken from tonsils revealed the KLEBS–LOEFFLER bacillus. No membrane present. The patient was removed to the room with the other diphtheria cases and a spray of DOBELL'S solution ordered.

February 4: Condition of tonsils unchanged. Temperature rose to 103° during the day; pulse 124. Bottle of antitoxin (number one) administered. The child was delirious and very restless. Breathing labored.

February 5: Some improvement in condition of patient shown by pulse, temperature, and general condition.

February 6: Continued improvement.

It will be noticed that at no time was there any visible membrane in the throat, but the presence of diphtheria germs was demonstrated by microscopical examination.

The complications arising among the cases referred to were few and hardly worth mentioning. In only one case was there even slight albuminuria with a few hyaline casts present. Laryngeal involvement was absent except in the first and only fatal case. The rash spoken of by writers was absent in the cases treated. A faint blush of the skin was noticed in a few of the cases but no distinct rash. The one death recorded can be attributed to the malignancy of the disease and the lateness at which the treatment was begun. Unless weakness of the eyes in two cases could be attributed to that cause, post-diphtheritic paralysis was absent.

While the committee does not regard antitoxin as a specific in the treatment of diphtheria, it is inclined to believe from its limited clinical experience that the preparation can be used with good results, and probably with better results than any other known remedy in the treatment of this disease.

PERSONAL EXPERIENCES REGARDING ALTITUDE IN ORGANIC CARDIAC DISEASE.*

By HUGH McCOLL, M. D., Lapeer, Michigan.

It is a commonly accepted idea, and one that is generally taught by clinicians in medicine, as well as by the mature thought of our text-books on medicine, that it is not safe for any one having organic disease of the heart with symptoms to go to a high altitude, or suddenly to leave the level of the sea for a place, say two thousand to four thousand feet above sea level. Such teaching has deterred physicians from sending patients with organic heart disease to higher altitudes even when some other conditions seemed to demand the change. This idea prevails among the laity also, and it would take considerable argument to get the consent of a patient who is aware that he has chronic organic cardiac disease of any kind to go to a mountain region. There are lesions of the heart in which this change would be injurious, but in the most frequent heart lesion—mitral insufficiency—when accompanied by a fair amount of compensatory hypertrophy, not only can there be no danger but a decided relief and benefit results from the altitude. It is reasonable to suppose that with the dry rarefied atmosphere at an elevation of four thousand to six thousand feet, the capillary pressure of the surface as well as in the lungs being lessened, the work of the heart will be diminished, and as a result the jaded, tired heartache disappears as if by magic. Where, however, the tendency to dilatation has advanced to the degree of interfering with the tricuspids, there might be danger, as well as with other difficulties of degeneration of the heart walls.

My own personal experience set me thinking on this subject, and as I have repeated my conclusions to men eminent as teachers in medicine, and found a look of astonishment on their countenances until they began to weigh the question scientifically, I thought I would bring it before this society in order to make it a matter of record. I have been a sufferer from attacks of acute rheumatism for twenty-five years, having had nine attacks during that time with four attacks of endocarditis, leaving me with much crippled mitral valves, and with a large hypertrophy, which partially compensates for the insufficiency. Twice I have had symptoms of failing compensation, following attacks of the grippe. Three years ago I was doing hard professional work and had constant fatigue-pain of the heart, with a sense of emptiness at the top of my head at night and a great deal of difficulty in recalling words. In the fall of that year I went to Mexico and when I had attained an elevation of five thousand feet at Las Vegas my cardiac fatigue-pain left me. I could walk with a great deal more ease and comfort than

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* Read before the Michigan State Medical Society, at Bay City, June 6, 1895.

I could here, and while others suffered from head symptoms (fullness) my feeling of head-emptiness had disappeared and a natural buoyancy took its place. For four weeks of the time I was away, I was at an elevation of from three thousand to ten thousand five hundred feet, and invariably experienced comfort. At Mexico City, seven thousand three hundred and fifty feet above the sea, I was able to walk freely without shortness of breath or fatigue, such as I experienced here.

Again last year I had a severe attack of the grippe which seriously crippled my heart, and finding that I was very slow in regaining my usual condition I went to California to the meeting of the American Medical Association. We were detained at Colorado Springs nearly three days on account of the washouts—elevation about five thousand feet—and the magical effect of the diminution of pressure was at once apparent. I have also sent to the same elevation, with marked benefit, two others suffering like myself. They returned to their homes after a couple of months in very good condition. The improvement in these cases was very rapid as well as in my own.

METHODS OF RECORDING IN THE LYING-IN HOSPITAL OF THE CITY OF NEW YORK.*

By CHARLES D. AARON, M. D., Detroit, Michigan.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

It is certainly important that in the attendance on obstetric cases the physician should be in possession of all the facts appertaining to them. Busy practitioners are apt to treat average cases of labor in a conventional manner, looking chiefly to prompt and safe delivery of the child, with the best protection to the mother against permanent injury. It is eminently proper that physicians always exercise this care, and the conscientious need not be reminded that their duty requires it. But the fact is that, in the first place, every case of labor has its peculiar status, and the proper consideration of this will go a great way toward solving each special problem. Further, it must not be forgotten that the variety of cases is largely determined by their divergent histories; these in turn affect not only the ease or the difficulty of maternal labor, but also the qualitative character of the embryo. Child-deliverance, looked at from the point of view of the obstetrician, is simple enough and can be disposed of in the usual way. But every childbirth presents items of congenital significance; the question of biology is involved as much as that of embryology; and there are facts in the evolution of the embryonic cell which will come to the surface of the young life after it has parted off for itself. We must gather data about the mother's present condition and her past history, so that we may be able to make allowance for whatever modifications there may be in the act of labor, and shed light upon the probabilities and the character of her labor. We must aim, in the interest of our profession, to draw generalizations out of the individual cases so that we can enrich medical science even through our modest experience.

It is the duty of all physicians to help elaborate our therapeutics, not merely to become more certain in surgery and midwifery themselves, but above all professional interests, to assist our medical science to progress, and we must bring our private experience to contribute to it whatever good we may have. We ought not to be satisfied with being expert ourselves nor to limit ourselves and each other with official "consultations" at the bedside and under stress. We ought to tolerate no restricted compass to our practice. We ought to collate our experiences and strive by patient observation to enlarge the scope of our insight. We need systematic analysis, so that the humblest of us can use it as a guide and can proportionately contribute to the common good. We ought to record every case fully, methodically, and scientifically. Nearly every case of childbirth, for instance, is a mine for scientific gold. What is the mother herself? How did the special circumstances come which are peculiar to the stages of her labor? What is her genealogical history? Are there any coincident pathological conditions? You see, not only physiological and anatomical information is obtained, but the record will bring out items of far-reaching significance for the mother as well as for the child. I am greatly surprised that there is no exact account of childbirth cases in our city. In fact we keep no records at all worthy of any scientific respect; though cases undoubtedly occur in varied phases which would be of interest and value to the medical fraternity, and by the disregard of which the progress of medical science misses fine opportunities. We cannot afford to do without the fullest reporting of those cases, which are crucial, and upon the treatment of which depend not only lives but also a further development of a progressive science, having great claims.

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*Read before the Detroit Academy of Medicine.

While spending a few weeks in New York I was fortunate to have the opportunity, at the Lying-In Hospital, to observe the system under which physicians report cases of labor in their private practice and such as are referred to medical attachees of the organization. I found the method of reporting such patients was very complete and it gave evidence of a high sense of scientific exactness. It appears that some of the physicians of New York at least cannot any longer allow the multitude of helpful observation to go unused. I am inclined to believe that many social problems as well as medical ones will be cleared up by the aid of such statistics. If we in this city would begin keeping records, some of us would be greatly aided in our private practice by the preservation of exact information; family physicians could diagnose better on later occasions, for the mother as well as for the child; and there would be an exchange of experience which by its accumulation must of necessity be of great benefit to us all.

Upon the application of a prospective mother the attending physician of the Lying-In Hospital is required to fill out a blank, which, under separate headings, gives a full record of the case in its several stages. The examination is thorough, both as to her condition as well as to her medical history. I submit the following "blanks," which are in use by such of the profession of the city of New York as are connected with the Lying-In Hospital, for the full reporting of cases of childbirth, and I invite the attention of the members of the Academy to the large scope of detailed diagnostic as well as statistic matter the several sheets contain. Every practitioner must fill out the rubrics with full returns and adequate answers. Everyone, who is aware of the grave responsibilities which rest upon us, not only with respect to the ethics of our fraternity, but also as public servants in one of the most significant, if not the most radical, interests of the community, will readily acknowledge the undeniable importance of such "control."

Confinement No.------ Application No.------

SOCIETY OF THE LYING-IN HOSPITAL OF THE CITY OF NEW YORK.
SEVENTEENTH STREET AND SECOND AVENUE,
NEW YORK.

PREGNANCY.

Name of Applicant,------------------------ Date of Application,---------------189--

Address,------------------------------ House,-------- Floor,-------- Room,--------

Application made by----------------through { *old patient,* *City Mission,* *Eastern Dispensary,* *New York Dispensary,* *Hebrew Charities,* *previously confined,* } ------------

Birthplace,------------ Married,---- Single,---- Widow,---- Age,---- Para,----

Diseases of Childhood (*first walked*),--

First Menstruation (*age*),-----------Character of Menstruation { *irregular,* *regular,* *profuse,* *scanty,* *duration,* *pain,* } ------------

----

Diseases of Puberty,--

Husband's History,--

Family History,--

Character of Previous Pregnancies, Labors, Puerperiums (*miscarriages*),--------------

First Labor (*date*),---- Last Labor (*date*),----Last Menstruation { *duration,* *date,* *quantity,* } ------------

Quickening (*date*),----------------- Condition in Present Pregnancy,-----------------

Bowels,--

Date of Expected Labor,--------------------------------189---

Date *SUBSEQUENT OBSERVATIONS.*

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EXAMINATION OF URINE.

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Abnormality:--

A. EXTERNAL EXAMINATION.

General Appearance (*face*), -------- (*attitude*), --------
(*height*), --------

Mammary Glands (*size*), -------- (*sensibility*), --------
(*consistency*), -------- (*veins*), --------
(*striæ*), -------- (*areolæ*), --------
(*papillæ*), -------- (*nipple*), --------
(*secretion*), --------

Abdomen (*form*), -------- (*pigmentation*), --------
(*striæ*), -------- (*umbilicus*), --------
(*abdominal fat*), -------- (*intermittent uterine contractions*), --------
(*fluctuation*), -------- (*abd. ballottement*), --------

Height from Symphysis of (*fundus*), -------- (*ensiform*), --------
(*umbilicus*), --------

Fetal Heart (*rapidity*), -------- (*regularity*), --------
(*position*), -------- (*more than one*), --------

Fetal Movements (*position*), -------- (*character*), --------

Uterine Sounds (*uterine murmur*), -------- (*umbilical murmur*), --------
(*other sounds*), --------

Uterus (*size*), -------- (*form*), --------
(*position*), --------

Fetals (*dorsal plane*), -------- (*small parts*), --------
(*head*), -------- (*movements*), --------
(*size*), --------

Circumference of (*abdomen at umbilicus*), -------- (*pelvis*), --------

Distance between (*spines*), -------- (*crests*), --------

External Oblique *R.*, -------- Trochanters, --------
L., --------
(*From post. sup. spine of one side to ant. sup. spine of opposite side*).

External Conjugate, --------

Lower Extremities (*edema*), -------- (*varicosities*), --------

B. INTERNAL EXAMINATION.

External Genitals (*pigmentation*), -------- (*secretion*), --------
(*veins*), -------- (*perineum*), --------

Vagina (*length*), -------- (*size*), --------
(*secretion*), -------- (*temperature*), --------
(*sensibility*), -------- (*mucous membrane*), --------

Cervix (*position*), -------- (*size*), --------
(*softening*), -------- (*laceration*), --------
(*external os*), -------- (*internal os*), --------

Uterus (*shape*), -------- (*consistency*), --------
(*situation*), -------- (*mobility*), --------
(*presenting part*), -------- (*ballottement*), --------

Pubic Arch, -------- Depth of Symphysis, --------

Diagonal Conjugate, --------

True Conjugate, --------

Transverse Diameter of Outlet, --------

Antero-posterior Diameter of Outlet, --------

Urine (*specific gravity*), -------- (*reaction*), --------
(*albumen*, -------- *per cent.*) (*sugar*, -------- *per cent.*
(*microscope*), --------

Examined by --------

Diagnosis, ---- Confinement No. ----

SOCIETY OF THE LYING-IN HOSPITAL OF THE CITY OF NEW YORK.

------------- *SEVENTEENTH STREET AND SECOND AVENUE,*
------------- NEW YORK. Application No. -----

RECORD OF LABOR.

Name of Applicant, ---------------------------- Date of Application, ---------------- 189--

Address, -------------------------------- House, -------- Floor, -------- Room, --------

Application made by ---------------- through { *old patient,* / *City Mission,* / *Eastern Dispensary,* / *New York Dispensary,* / *Hebrew Charities,* / *previously confined,* } -------------

Birthplace, ------------ Married, ---- Single, ---- Widow, ----- Age, ---- Para, ----

Diseases of Childhood (*first walked*), --

First Menstruation (*age*), ------ Character of Menstruation { *irregular,* / *regular,* / *profuse,* / *scanty,* / *duration,* / *pain,* } ------------
----

Diseases of Puberty, --

Family History, --

Character of Previous Pregnancies, Labors, Puerperiums (*miscarriages*), ---------------

First Labor (*date*), ---- Last Labor (*date*), ---- Last Menstruation { *duration,* / *date,* / *quantity,* } --------

Quickening (*date*), ---------------- Condition in Present Pregnancy, ----------------

Month of Gestation, --------- Urine { *normal,* / *albumen,* / *sugar,* / *amount,* } ------------- Bowels, -------------

PREPARATORY STAGE.

Date (*began*), ---------------- 189--, hour, -------- M.

Sinking of Uterus { *effect upon abdomen,* / " " *chest,* / " " *bladder,* / " " *rectum,* } ------------------------------------
----

Cervix { *shortening,* / *secretion,* } --

Internal Os { *amount of dilatation,* / *presenting part,* } --

Uterine Contractions { *pain,* / *frequency,* } ------------- Fetal Heart { *rapidity,* / *regularity,* / *position,* } ----------

Show { *date of onset,* / *character,* / *amount,* } --

Duration, ------ hours, ------ minutes. Date (*terminated*), ---------- 189--, hour, ------- M.

FIRST STAGE.

Date (*began*) { *observed,* / *statement of patient,* } ----------- 189--, hour, -------- M.

Uterine Contractions (*effect on os*), ---------------------- (*frequency*), --------------------

Fetal Heart (*rapidity*), ---------------- (*regularity*), ---------------- (*position*), -----------

Cervix (*size*), -------------------------------- (*position*), ------------------------------------

Temperature, ------ Pulse, ------ Position of Parturient { *walking,* / *dorsal,* / *lateral,* } ---------------

Membranes *intact, spontaneous rupture, artificial rupture, by whom,* ---------------- Vaginal Secretion, ---------
Vaginal examinations *made by, number,* --
Visited by (*attending physician*), ------------------ (*staff*), ------------------------
Pelvis, ------------ Soft Parts, ------------ Bladder, ------------ Rectum, ------------
Presence of attendant (*time of arrival*), --
Presentation, ------------------- Position, ----------------- Diet, ------------------
Hemorrhage (*character*), ---------------------------- (*treatment*), ----------------------
Medication, --
Duration, ------ hours, ------ minutes. Date (*terminated*), ---------- 189--, hour, -------- M.
(*from beginning of labor.*)

SECOND STAGE.

Date (*began*), ----------------- 189--, hour, --------- M.
Uterine Contractions (*effect on progress*), --------------- (*frequency*), -----------------
Fetal Heart (*rapidity*), ------------- (*regularity*), --------------- (*position*), -------------
Cervix, --
Temperature, ------ Pulse, ------ Position of Parturient *walking, dorsal, lateral,* ----------------
Membranes *intact, spontaneous rupture, artificial rupture, by whom,* ---------------- Vaginal Secretion, ---------
Vaginal Examinations *made by, number,* --
Pelvis, ------------ Soft Parts, ------------ Bladder, ------------ Rectum, ------------
Presence of Attendant, --
Visited by (*attending physician*), -------------------- (*staff*), ----------------------
Presentation, ------------------ Position, ------------------- Diet, ------------------
Preservation of Perineum (*method*), --
Cord about Neck (*number of coils*), ----------------- (*treatment*), ----------------------
Hemorrhage (*character*), ---------------------------- (*treatment*), ----------------------
Duration, ----- hours, ------ minutes. Date (*terminated*), ---------- 189--, hour, -------- M.

THIRD STAGE.

Date (*began*), ----------------- 189--, hour, --------- M.
Uterine Contractions (*frequency*), --------------- (*effect on uterus*), --------------------
Temperature, ------ Pulse, ------ Position of Parturient *walking, dorsal, lateral,* ----------------
Vaginal Examinations *made by, number,* --
Intra-uterine Manipulations, --
Presence of Attendant, --
Visited by (*attending physician*), ------------------ (*staff*), ----------------------
Hemorrhage (*character*), --------------------------- (*treatment*), ----------------------
Placental Delivery (*time*), ------------------------ (*method*), ----------------------
Placenta *condition, weight, size, form, thickness, calcareous, succenturiata, apoplexy, cysts, fibrous, fatty,* --
Cord (*length*), ------------- (*insertion*), ------------- (*thickness*), --------------------
Membranes (*complete*), ------------- (*opening*), ------------ (*umbilical vesicle*) -------------
Uterus, (*condition*), ------- (*management*), --------- (*height after delivery of placenta*), -------
Duration, ------ hours, ------ minutes. Date (*terminated*), ---------- 189--, hour, -------- M.
Perineum *intact, lacerated, operation,* --
(*In case of plural births specify number and character of placentæ, cords and amniotic cavities.*)

SUMMARY OF LABOR.

First Stage--	began,	date,----	hour,----M.	189--	Duration, hours,---minutes,---
	terminated,	" ----	" ----M.	"	
Second Stage	began,	" ----	" ----M.	"	" " --- " ---
	terminated,	" ----	" ----M.	"	
Third Stage -	began,	" ----	" ----M.	"	" " --- " ---
	terminated,	" ----	" ----M.	"	
		Total Duration of Labor,			" --- " ---

Temperature,-------- Pulse,------- Height of Fundus above Symphysis,------inches.

(*Observed one hour after completion of labor.*)

Delivered by,--

Assistant;--

COMPLICATIONS OR OPERATIONS.

SUBSEQUENT RECORD.

Date,-------------------189-- ----------------------Day.

1. Countenance,---------- 2. Tongue,-------------- 3. Bladder,--------------
4. Bowels,-------------- 5. Sleep,-------------- 6. Stomach (*diet*),---------
7. Temperature, A.M.-P.M.- 8. Pulse, A. M.----P. M.---- 9. Breasts (*condition*), ----
(*secretion*),-----------
10. Uterus (*height*),-------- 11. Genitals,-------------- 12. Lochia (*quantity*),------
(*condition*),---------- (*character*),-(*odor*), --
13. Treatment and Remarks:--

Date,-------------------189-- ----------------------Day..

1. Countenance,---------- 2. Tongue,-------------- 3. Bladder,--------------
4. Bowels,-------------- 5. Sleep,-------------- 6. Stomach (*diet*),---------
7. Temperature, A.M.-P.M.- 8. Pulse, A. M.----P. M.---- 9. Breasts (*condition*), ----
(*secretion*),-----------
10. Uterus (*height*),-------- 11. Genitals,-------------- 12. Lochia (*quantity*),------
(*condition*),---------- (*character*), -(*odor*),--
13. Treatment and Remarks:--

Date,-------------------189-- ----------------------Day.

1. Countenance,---------- 2. Tongue,-------------- 3. Bladder,--------------
4. Bowels,-------------- 5. Sleep,-------------- 6. Stomach (*diet*),---------
7. Temperature, A.M.-P.M.- 8. Pulse, A. M.----P. M.---- 9. Breasts (*condition*),----
(*secretion*),-----------
10. Uterus (*height*),-------- 11. Genitals,-------------- 12. Lochia (*quantity*),------
(*condition*),---------- (*character*),-(*odor*), --
13. Treatment and Remarks:--

Date,-------------------189-- ----------------------Day.

1. Countenance,---------- 2. Tongue,-------------- 3. Bladder,--------------
4. Bowels,-------------- 5. Sleep,-------------- 6. Stomach (*diet*),---------
7. Temperature, A.M.-P.M.- 8. Pulse, A. M.----P. M.---- 9. Breasts (*condition*), ----
(*secretion*),-----------
10. Uterus (*height*),-------- 11. Genitals,-------------- 12. Lochia (*quantity*),------
(*condition*),---------- (*character*),-(*odor*), --
13. Treatment and Remarks:--

Date,------------------------189-- ------------------------Day.

1. Countenance. ----------	2. Tongue, --------------	3. Bladder, --------------
4. Bowels, --------------	5. Sleep, --------------	6. Stomach (*diet*), ----------
7. Temperature, A.M.--P.M.--	8. Pulse, A. M.----P. M.----	9. Breasts (*condition*), -----
		(*secretion*), ----------
10. Uterus (*height*), --------	11. Genitals, --------------	12. Lochia (*quantity*), ------
(*condition*), ----------		(*character*), -(*odor*), --

13. Treatment and Remarks: --

Date,------------------------189-- ------------------------Day.

1. Countenance, ----------	2. Tongue, --------------	3. Bladder, --------------
4. Bowels, --------------	5. Sleep, --------------	6. Stomach (*diet*), ----------
7. Temperature, A.M.--P.M.--	8. Pulse, A. M.----P. M.----	9. Breasts (*condition*), ----
		(*secretion*), ----------
10. Uterus (*height*), --------	11. Genitals, --------------	12. Lochia (*quantity*), ------
(*condition*), ----------		(*character*), -(*odor*), --

13. Treatment and Remarks: --

Date,------------------------189-- ------------------------Day.

1. Countenance, ----------	2. Tongue, --------------	3. Bladder, --------------
4. Bowels, --------------	5. Sleep, --------------	6. Stomach (*diet*), ----------
7. Temperature, A.M.--P.M.--	8. Pulse, A. M.----P. M.----	9. Breasts (*condition*), ----
		(*secretion*), ----------
10. Uterus (*height*), --------	11. Genitals, --------------	12. Lochia (*quantity*), ------
(*condition*), ----------		(*character*), -(*odor*), --

13. Treatment and Remarks: --

Date,------------------------189-- ------------------------Day.

1. Countenance, ----------	2. Tongue, --------------	3. Bladder, --------------
4. Bowels, --------------	5. Sleep, --------------	6. Stomach (*diet*), ----------
7. Temperature, A.M.--P.M.--	8. Pulse, A. M.----P. M.----	9. Breasts (*condition*), ----
		(*secretion*), ----------
10. Uterus (*height*), --------	11. Genitals, --------------	12. Lochia (*quantity*), ------
(*condition*), ----------		(*character*), -(*odor*), --

13. Treatment and Remarks: --

Date,------------------------189-- ------------------------Day.

1. Countenance, ----------	2. Tongue, --------------	3. Bladder, --------------
4. Bowels, --------------	5. Sleep, --------------	6. Stomach (*diet*), ----------
7. Temperature, A.M.--P.M.--	8. Pulse, A. M.----P. M.----	9. Breasts (*condition*), ----
		(*secretion*), ----------
10. Uterus (*height*), --------	11. Genitals, --------------	12. Lochia (*quantity*), ------
(*condition*), ----------		(*character*), -(*odor*), --

13. Treatment and Remarks: --

Date,------------------------189-- ------------------------Day.

1. Countenance, ----------	2. Tongue, --------------	3. Bladder, --------------
4. Bowels, --------------	5. Sleep, --------------	6. Stomach (*diet*), ----------
7. Temperature, A.M.--P.M.--	8. Pulse, A. M.----P. M.----	9. Breasts (*condition*), ----
		(*secretion*), ----------
10. Uterus (*height*), --------	11. Genitals, --------------	12. Lochia (*quantity*), ------
(*condition*), ----------		(*character*), -(*odor*), --

13. Treatment and Remarks: --

Date,------------------------189 ------------------------Day.

1. Countenance, ----------	2. Tongue, --------------	3. Bladder, --------------
4. Bowels, --------------	5. Sleep, --------------	6. Stomach (*diet*), ----------
7. Temperature, A.M.--P.M.--	8. Pulse, A. M.----P. M.----	9. Breasts (*condition*), ----
		(*secretion*), ----------
10. Uterus (*height*), --------	11 Genitals, --------------	12. Lochia (*quantity*), ------
(*condition*), ----------		(*character*), -(*odor*), --

13. Treatment and Remarks: --

Confinement No.------ Application No.------

SOCIETY OF THE LYING-IN HOSPITAL OF THE CITY OF NEW YORK,

SEVENTEENTH STREET AND SECOND AVENUE,
NEW YORK.

RECORD OF CHILD.

Date of Birth,----------------189--. Sex,------------ Weight,---------
Name of Mother,-------------------- Address,---------------- Para,---------
Present Condition of Mother,--
Previous History of Mother,--

Time of Gestation,------------mo. Presentation,------------ Position,---------
Caput Succedaneum (*location, size*),------------------ Umbilical Cord,--------------
Cephalohematoma (*location, size*),--
Labor { *easy,* *tedious,* *instrumental,* } ------------------------ Duration,----hours,----minutes,----

OBSERVATION TO BE MADE AT TIME OF BIRTH.

Primary Respirations { *normal,* *absent,* *delayed,* *superficial,* (*if delayed, how long*), *how restored,* } --Capillary Circulation { *normal,* *congested,* *anemic,* } - --
Temperature,----------------------------------
(*Taken in rectum for five minutes immediately after birth*).

MEASUREMENTS.

DIAMETERS.

HEAD:			BODY:
Occipito-mental,--------	Fronto-mental,--------	Biparietal,----	Bisacromial,----
Occipito-frontal,--------	Trachelo-bregmatic,--	Bitemporal,---	Dorso-sternal,--
Suboccipito-bregmatic,--		Bimastoid,----	Bitrochanteric,-
		Bimalar,------	Sacro-pubic,----

CIRCUMFERENCES.

HEAD:	BODY:
Occipito-mental,--------	Bisacromial,----
Suboccipito-bregmatic,--	Bitrochanteric,--

Length of Child,--------inches. Vertex-coccygeal length of Child,--------inches.
Development of Cranial Bones, (*sutures, size of fontanelles*),----------------------------
Sacrum (*depth of indentation*),--

GENERAL CONDITION.

Living,---------------- Still-born,------------------ Macerated,-----------
Development,------------ Vernix caseosa,-------------- Lanugo,--------------
Breasts,--------- Skin,--------- Bowels,--------- Subcutaneous fat,---------
Nose,------------ Eyes,-------- Mouth,---------- Umbilicus,--------------
Urine,---------- Cry { *vigorous,* *weak,* *absent,* } ----------------

CONGENITAL ANOMALIES.

Attended by--

GENERAL REMARKS.

SUBSEQUENT RECORD.

Date, ---------- 189-- ---------- Day.
1. Sleep, ---------- 2. Eyes, ---------- 3. Nursing, ----------
4. Cry, ---------- 5. Nose, ---------- 6. Vomiting, ----------
7. Breasts, ---------- 8. Mouth, ---------- 9. Urine, ----------
10. Umbilicus { *cord off* / *pus,* } -- 11. Skin { *color,* / *eruption,* } ------ 12. Stools { *number,* / *color,* } ----
Remarks, ----------

Signature, ----------

Date, ---------- 189-- ---------- Day.
1. Sleep, ---------- 2. Eyes, ---------- 3. Nursing, ----------
4. Cry, ---------- 5. Nose, ---------- 6. Vomiting, ----------
7. Breasts, ---------- 8. Mouth, ---------- 9. Urine, ----------
10. Umbilicus { *cord off* / *pus,* } -- 11. Skin { *color,* / *eruption,* } ------ 12. Stools { *number,* / *color,* } ----
Remarks, ----------

Signature, ----------

Date, ---------- 189-- ---------- Day.
1. Sleep, ---------- 2. Eyes, ---------- 3. Nursing, ----------
4. Cry, ---------- 5. Nose, ---------- 6. Vomiting, ----------
7. Breasts, ---------- 8. Mouth, ---------- 9. Urine, ----------
10. Umbilicus { *cord off* / *pus,* } -- 11. Skin { *color,* / *eruption,* } ------ 12. Stools { *number,* / *color,* } ----
Remarks, ----------

Signature, ----------

Date, ---------- 189-- ---------- Day.
1. Sleep, ---------- 2. Eyes, ---------- 3. Nursing, ----------
4. Cry, ---------- 5. Nose, ---------- 6. Vomiting, ----------
7. Breasts, ---------- 8. Mouth, ---------- 9. Urine, ----------
10. Umbilicus { *cord off* / *pus,* } -- 11. Skin { *color,* / *eruption,* } ------ 12. Stools { *number,* / *color,* } ----
Remarks, ----------

Signature, ----------

Date, ---------- 189-- ---------- Day.
1. Sleep, ---------- 2. Eyes, ---------- 3. Nursing, ----------
4. Cry, ---------- 5. Nose, ---------- 6. Vomiting, ----------
7. Breasts, ---------- 8. Mouth, ---------- 9. Urine, ----------
10. Umbilicus { *cord off* / *pus,* } -- 11. Skin { *color,* / *eruption,* } ------ 12. Stools { *number,* / *color,* } ----
Remarks, ----------

Signature, ----------

Date, ---------- 189-- ---------- Day.
1. Sleep, ---------- 2. Eyes, ---------- 3. Nursing, ----------
4. Cry, ---------- 5. Nose, ---------- 6. Vomiting, ----------
7. Breasts, ---------- 8. Mouth, ---------- 9. Urine, ----------
10. Umbilicus { *cord off* / *pus,* } -- 11. Skin { *color,* / *eruption,* } ------ 12. Stools { *number,* / *color,* } ----
Remarks, ----------

Signature, ----------

SOCIETY OF THE LYING-IN HOSPITAL OF THE CITY OF NEW YORK,

SEVENTEENTH STREET AND SECOND AVENUE,
NEW YORK.

APPLICATION FOR ASSISTANCE.

When sending to the Dispensary for assistance, students must in all cases use and fill out this blank.

New York,________________o'clock,______M.

Patient's Name,________________

Address,________________

House,__________Floor,__________Room,__________

Number of Pregnancy,________________

Month of Gestation,________________

Duration of First Stage,________________

Duration of Second Stage,________________

Duration of Third Stage,________________

Pulse,__________Temperature,__________

Fetal Heart (frequency),__________Position,__________

Fetus by abdominal palpitation	Dorsal plane,________________
	Head,________________
	Small parts,________________
	Movements,________________

Presentation,__________Position,__________

Os uteri (size),__________Condition,__________

Membranes,________________

Presenting part	Above brim,________________
	Engaged,________________
	At outlet,________________
	On Perineum,________________

Character and frequency of labor pains,________________

____

General conditions and remarks,________________

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Attendant.

THE TREATMENT OF CHOLERA INFANTUM.*

BY RUSH McNAIR, M. D., KALAMAZOO, MICHIGAN.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

IN cholera infantum there is one method of treatment more successful than any other; it is lavage.

It matters not whether the choleraic condition is primary, or has followed a term of gastro-intestinal disease, the procedure should be the same. The child's stomach and rectum should at once be irrigated. Sterilized water practically answers the purpose. I have used alkaline water and have added antiseptics, but find no advantage from them.

A soft rubber number ten catheter, with a funnel inserted in the open end, will make a satisfactory stomach tube. Its efficiency as a siphon may be increased by adding a foot or more of soft rubber tubing. The babe's arms are now pinioned by an assistant who wraps a blanket about the body, steadying the head with his hands. The tube, dipped in sterilized water, needs no other lubricant than the throat mucus to facilitate its passage into the stomach. At each seance the stomach and rectum should be flushed until the water returns clear. These seances should be repeated *pro re nata*, which will perhaps be once in six hours for the stomach, and once in four hours for the rectum. The former should be performed by the physician only; the latter can often be satisfactorily done by any reasonably intelligent person. It is not the quantity of putrescent debris which the stomach siphon delivers, but the quality, which renders the treatment effective. There is usually recovered perhaps half a fluidrachm of slimy, dark-colored clots, which possess a peculiar musty, mildly-fetid odor. Upon microscopical examination this is seen to be swarming with micro-örganisms.

The change wrought in the little patient by this procedure will be remarkable. Comparable with it is the phenomenon of morphine hypodermically exhibited in acute pain, or an anesthetic in spasmodic asthma. The babe which a half hour before treatment lay in imminent collapse—with the pulse very rapid and almost imperceptible; the fontanelles depressed; eyes sunken, upturned, or moving restlessly, and the lids half closed; the tongue dry and flaccid on the floor of the mouth: or appeared greatly perturbed—throwing itself about the bed; rolling the head from side to side; and sighing with almost every respiration; all significant tokens of approaching dissolution—has now fallen into a sleep, apparently natural and reposeful, which I venture to assert will mark the crisis of the disease.

Food must be absolutely prohibited until all fermentable processes have ceased. Sterilized water should be freely given. By these means the *materies morbi*—the products of fermentation, the ptomains and other toxins—is entirely washed away or rendered almost innocuous by high dilution, and the waste in the circulatory system is replenished.

The method described, together with the correction of errors of diet, will in most cases be the only therapy necessary. Other cases will require the employment of classical methods of treatment. Of all vaunted remedies in cholera infantum, I most often invoke the aid of the mild chloride, the cholagogic and antiseptic properties of which sustain its high reputation in this class of diseases. For antiseptic purposes the dosage employed is larger than is usually the custom for other purposes; five to ten grains render more efficient service, a fact which many an empiric has noted. Bismuth, too, is more than a placebo. It is a sedative to the irritated gastrointestinal area, and its slight, astringent effect is beneficial.

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* Read before the KALAMAZOO ACADEMY OF MEDICINE.

The following are reports of several cases which occurred in my practice and were treated by lavage:

Case I.—A bottle-fed, six-months'-old female child, after suffering several weeks from digestive disorders, had been vomiting and purging during six or eight hours. The peculiar, insinuating, musty, fetid odor of the stools filled the house. After stool the patient would lie as if already dead, with eyes upturned, lids open and tongue fallen; fontanelles depressed; hands and feet clammy and cold. Temperature 97½°; pulse 200, or uncountable. DOCTOR OSBORNE was called in consultation.

Treatment.—Lavage of stomach and rectum; morphia, and the mild chloride; withdrawal of all food, only sterilized water ingested for thirty-six hours. In twelve hours the temperature had increased to 102°; pulse decreased to 140, and convalescence led to recovery in three days.

Case II.—An adopted, bottle-fed male child of seven months. Characteristic symptoms of cholera well established.

Treatment.—Lavage of stomach and rectum; food withdrawn; sterilized water freely given; together with large doses of the mild chloride. Convalescence was immediate and uneventful.

Case III.—A ten-months'-old male child, bottle-fed with condensed milk, had suffered for three days with the results of fermentative indigestion. There had been the usual symptoms, namely—fever, vomiting, diarrhea, spinach stools, and sleeplessness.

Treatment.—After forty-eight hours convalescence seemed established. Over-persuaded by the importunities of the parents, I allowed the child to be fed its customary rations. There was immediate return of severe symptoms of toxemia. The most alarming symptoms were those which we have been accustomed to attribute to the function of the reflex nervous system, but are properly held to be the direct results of toxins acting on the nerve centers. These conditions, if not removed, lead to the so-called "head symptoms" or meningitis of intestinal diseases. This patient had now been without sleep almost three days. Opiates had had no effect at all. The child was throwing itself restlessly about, eyes wide open, staring and sunken, fontanelles depressed, pulse 140, temperature 103°, respiration irregular and sighing, hands and feet cold, abdomen tympanitic, and the dejections had become colliquitive. Such symptoms prognose a moribund condition in six to twelve hours. DOCTOR VAN ZWALUWENBERG, who saw the case at this time, agreed to the proposed lavage. The results were immediate, and radically changed the course of events. Restful sleep gave the exhausted organism reaction. Stomach lavage was repeated at the end of eight hours, and rectal lavage regularly every four hours. The mild chloride previously prescribed was continued. Sterilized water was administered from the beginning. I prescribed barley water at the end of eighteen hours, and proper food in forty-eight hours. Convalescence was uncomplicated.

TRANSACTIONS.

GRAND RAPIDS ACADEMY OF MEDICINE.

STATED MEETING, MAY 13, 1895.

THE PRESIDENT, *pro tempore*, D. EMMET WELSH, M. D., IN THE CHAIR.
REPORTED BY COLLINS H. JOHNSTON, M. D., SECRETARY, *pro tempore*.

DISCUSSION OF PAPERS.

DOCTORS H. M. KING, B. S. CREBS and R. H. SPENCER read papers recounting their experience with antitoxin in the treatment of diphtheria. (See page 354).

DOCTOR HENRY HULST: I have immunized three children who were exposed to diphtheria. They did not take the disease, but all three developed erysipelas about the place of insertion of the needle, although strict antiseptic precautions had been observed, the needle having been sterilized in a flame. I think the infection was due to the preparation used, which was somewhat cloudy. I am still in doubt as to the value of antitoxin as a curative agent. I would place much more reliance upon the clinical symptoms of a case than in the finding of the KLEBS–LOEFFLER bacillus. Is the KLEBS–LOEFFLER bacillus the specific cause of diphtheria?

DOCTOR BOISE: I think children under one year of age are not apt to take diphtheria, so that lack of symptoms, after an immunizing dose, proves nothing.

DOCTOR D. EMMET WELSH: I wish to call attention to the fact that in the cases reported this evening, whisky, strychnine, et cetera, have been used as adjuvants. Now, in my opinion, these adjuvants had much to do with the benefit derived from the treatment. Many different methods of treating diphtheria have been proposed in times past, and each successive one seemed for a time to be an improvement on the old method of treatment. We see many cases of exudative diseases in the throat attended with high fever, membrane, et cetera, which recover with general treatment and the use of some mild antiseptic agent. To determine the specific value of antitoxin it must be used alone. I have recently treated forty-four cases in Saint John's Orphan Asylum in this city, as follows: Each child had its own spoon, clothes, towel, et cetera. Two grains of quinine were given morning and evening with whisky and iron, and the throats were brushed with a strong solution of sulpho-calcine. Thirty-five of the cases were under treatment at one time. Of the forty-four cases so treated, four died. Fifteen per cent. had epistaxis, twelve per cent. to fifteen per cent. had laryngeal involvement, and twenty per cent. had post-nasal complication. The recoveries took place in from five days to two weeks. I think that nursing and discipline are great factors in the success of any line of treatment.

DOCTOR WATSON: I do not expect any practical results from antitoxin. I believe croup and diphtheria to be identical, and when I was health officer in this city I insisted upon cases of croup being reported and the houses placarded.

DOCTOR A. J. PRESSEY: It would take hundreds, and perhaps thousands, of cases treated with antitoxin to prove its value. I have recently seen a very severe case of diphtheria in a family where there were four other small children who did not take the disease. If these four children had been immunized I would have given antitoxin the credit.

Doctor Hugo Lupinski: I think it is very difficult to differentiate between the true and the pseudobacillus by the use of the microscope and cultures alone. The infectiousness of the bacillus must be proven by experiments on animals. I recently had a case of pseudomembranous sore throat from which I made two cultures. Streptococci were shown to be present, but no Klebs–Loeffler bacilli. In this case diplopia followed in about ten days. In another case of pseudomembranous sore throat, in which the child had chill, fever, enlarged cervical glands, foul breath, et cetera, I made a diagnosis of diphtheria. I gave a few doses of calomel, and on the second day I found that the child had gone to school. Three or four other cases, soon after, developed in the same neighborhood, all of which took the same rapid course to recovery. I do not consider these cases diphtheria.

Doctor Welsh: I have seen a good many cases such as Doctor Lupinski describes—with high fever, foul breath, pain in the extremities, severe inflammation of the tonsils, uvula, palatine arches, et cetera, with a fibrinous-looking exudate over the tonsils. A few doses of quinine and calomel cured them in thirty-six hours.

Doctor King: I do not think a diagnosis could be made from microscopical appearances alone.

STATED MEETING, MAY 27, 1895.

The President, SAMUEL P. WOOSTER, M. D., in the Chair.
Reported by LOUIS A. ROLLER, M. D., Secretary, *pro tempore*.

DISCUSSION OF PAPERS.

Doctor Eugene Boise read a paper on "Hysterectomy for Relief of Pressure Symptoms Due to Fibroid Tumor." The following is an abstract:

About May 15, Mrs. R. consulted me because of severe pain in the lower part of the abdomen, aggravated by standing or walking, with gradually increasing constipation. Examination revealed a fibroid tumor growing in the posterior wall of the uterus and extending to the umbilicus. It involved the lower segment of the body and the cervix, which was thinned and spread out over it as over a child's head in the first stage of labor. The uterus was so high in the pelvis, and the tumor so large, that I decided to remove it by abdominal section. The usual incision was made. No adhésions were found. The broad ligaments were tied by double ligature which embraced the tissue from outside of the ovary to the uterus, thus firmly securing the ovarian arteries. The ovaries and tubes were separated by scissors from the broad ligaments, and these were then peeled away from the uterus, section through the peritoneum, anteriorly and posteriorly having been made, and the uterus and tumor were separated from the uterine arteries without further ligature. But by reason of deep pelvic adhesions, atmospheric pressure, and the wedging of the tumor in the pelvis, it was impossible to dislodge it intact. I therefore cut through the thinned layer of uterine cervix, anteriorly and posteriorly, and enucleated the tumor, afterward trimming down the thin cervical walls to leave a small cervix, virtually making a Baer operation, but without tying the uterine arteries. The patient made an excellent recovery and is now enjoying good health.

DOCTOR S. C. GRAVES: The case reported by DOCTOR BOISE was clearly one for the EASTMAN operation. I have never done the ALEXANDER operation, and do not think it should be done when the ovaries are diseased. I prefer ventrofixation. No one operation will prove satisfactory in removal of the uterus. I believe in the through-and-through suture, because, first, it is easily taken out, and nothing is left in; second, there is a broader surface for union; third, there is a saving in time.

DOCTOR REUBEN PETERSON read a paper entitled "A Case of Hydronephrosis due to Renal Calculi; Abdominal Nephrectomy; Recovery." The following is an abstract:

MISS A. C.; American; aged twenty-two years; single; occupation, housemaid. Family history, negative, except that she thinks her father died of some kidney trouble.

Previous history.—When the patient was eight years old she fell and sustained an injury of her right side, and was laid up in bed for two weeks. She has always had more or less pain in that side ever since. The pain was usually dull in character, but was occasionally so severe as to confine her to her bed. As she grew older, the pain became more severe and more disabling. She first noticed blood in her urine when she was nine years old. This was almost of daily occurrence until she was eighteen. Since that time she has only noticed it during the attacks of pain. She had quite a seizure of pain about two years ago, located in the right side, accompanied by cessation of menstruation.

She consulted DOCTOR MURPHY, of Chicago, who diagnosed a cystic kidney, from the presence of a lump situated just at the border of the right ribs. The patient had noticed this lump for six years. The doctor inserted a hypodermic needle, drew off some fluid and then advised an operation. After this examination she was laid up with severe pain and fever which lasted some time. She went to Saint Joseph's Hospital, where she was under the care of DOCTOR SENN, who could find no evidences of cystic kidney. She then consulted DOCTOR HENROTIN, who made a vaginal examination and found a cyst of the right ovary, which he removed by celiotomy. She made a good recovery from the operation, but the pain in the right side still continued, and was so severe in character that it prevented her from working. At times she had considerable blood in her urine.

She was referred to DOCTOR PETERSON and examined by him at his office on September 26, 1894. There were no evidences of cystic kidney, but there was some tenderness in the right vaginal fornix, which was considered to be due to the stump of the excised right tube and ovary. She was sent to Butterworth Hospital and treated locally with icthyol tampons for over two months. During this time examination of the urine showed no evidences of any trouble with the kidneys, about the normal amount of urine being passed, and showing no traces of blood. The patient gained in flesh and strength, and her color and appetite became much better, but the pain in the right side continued.

After consultation with DOCTOR EUGENE BOISE, it was decided to make an exploratory celiotomy, for the purpose of ascertaining the cause of the pain. The question of possible chronic appendicitis was considered, as the pain was located somewhat in the region of the appendix. The diagnosis was thought to lie either between trouble with the kidney or the appendix, or a band of adhesions from the previous celiotomy. The operation was performed on December 3, 1894, assisted by DOCTOR BOISE. An incision was made, three inches in length, in the linear semilunaris over the region of the appendix. The latter was found to be perfectly normal. The stump of the excised right tube and ovary was next examined, and nothing abnormal could be found in connection with it. No ligature was present. A systematic examination of the entire abnormal contents was then made, which resulted in the discovery, beneath the peritoneum in the region of the right kidney, of a fluctuating tumor. The left kidney was palpated and found to be apparently normal. The peritoneum was cut through, over the centre of the tumor, until a blue, glistening cyst was disclosed. The tumor was then carefully dissected out from its bed. This proved to be a most difficult and delicate task, because of the thin walls of the tumor and the density of the adhesions. The enucleation was done completely with the fingers, the incision having to be carried upward nearly to the edge of the ribs. The kidney was finally released in all directions except the pedicle made up of the renal vessels and ureter. The latter was separated and cut midway between two silk ligatures which were applied. One large silk ligature was placed around both artery and vein. A forceps was then placed close to the kidney and the mass removed. The stump was dropped, and the peritoneum allowed to settle over it, no stitches being applied. The abdomen was not irrigated, but little hemorrhage having taken place. No drainage was used. The parietal peritoneum was sewed up with catgut, the facia with interrupted silkworm-gut sutures, and the muscles with catgut. Catgut was also used for the skin.

The patient suffered very little from shock, the operation lasting a little over an hour. She left the operating table in good condition, and made an uninterrupted recovery. The stitches were removed on the ninth day and the wound was found to have healed by first intention. The patient is now free from pain, and able to do light work. The urine was examined carefully after the operation. About the normal amount was passed in the twenty-four hours, showing that the one kidney was able to do all the work.

PATHOLOGICAL REPORT BY DOCTOR J. B. WHINERY, GRAND RAPIDS, MICHIGAN.

The kidney, at the time of removal, had become changed into a fluctuating, lobulated, kidney-shaped tumor. The length was six inches, breadth four inches, weight one pound. Surface smooth, and no evidence of any inflammatory action. On palpation, calculi ranging in size from a grain of sand to the size of a pea, or a little larger, could be detected. These calculi were scattered through different parts of the tumor. On making an incision into the mass, twelve ounces of a brownish colored liquid escaped. No chemical or microscopical examination of the liquid was made, on account of the tumor's having been in a preserving fluid for some time, and the likelihood of osmosis having taken place. Most of the kidney structure had disappeared, and there remained only pouches separated from each other by septa of fibrous tissue. In these pouches free calculi were found, about two dozen in all, some of a dark clay-colored appearance, others of a dark brown. A thin crust of crystals covered a few of the calculi. Firmly imbedded in the mouth of the ureter was a dark brown calculus, the size of a hazel-nut, completely occluding the lumen and preventing the passage of urine. Of the kidney structure only a small portion, varying in thickness from a mere shell to three-quarters of an inch, was left. Microscopical examination of this remaining kidney structure revealed atrophy, and a functionless condition of the secretory elements.

Among the many causes of hydronephrosis may be mentioned renal calculi, stricture or twisting of the ureter, tumors from without, malignant diseases, enlarged prostate, urethral stricture, phimosis, and reduplication of the ureter. It is stated that one-third of the cases have a congenital cause. Calculi are present in forty per cent. of the acute cases. In about fifteen per cent. of cases both kidneys are involved. In later life hydronephrosis is generally more frequent in women than in men. The first result of the accumulated urine is a flattening of the papillæ and a thinning of the cortex. The kidney structure at length undergoes atrophy and the glomeruli and cells lose their secretory power. The obstructed liquid is at first urine, but as the pressure increases less and less urine is excreted and after a while it ceases entirely. The sac may continue to enlarge by the secretion of liquid from the mucous membrane of the pelvis and calices. The fluid is often colorless, containing only sodium chloride and epithelium, and of low specific gravity. It sometimes contains albumen and phosphates. It may be turbid and contain mucus or pus, and the color may be brown or red, a change due to altered or unaltered blood. The size of an hydronephrosic kidney varies. It may be no larger than an ordinary kidney or it may be even smaller, on the other hand it may hold quarts of liquid. The specimen referred to above is a good illustration of hydronephrosis caused by a calculus.

DETROIT ACADEMY OF MEDICINE.

STATED MEETING, JANUARY 22, 1895.

The President, ARTHUR H. BIGG, M. D., in the Chair.
Reported by W. B. SPRAGUE, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Hal C. Wyman read a paper on "Osteomyelitis." (See page 345).

Doctor Emerson: I have been greatly interested in this excellent paper in a general way, although it is so foreign to my line of work that I am not competent to give it any intelligent criticism. The paper seems to me to be very exhaustive and complete.

Doctor Hitchcock: In my reading to-day I came across a report of a case of osteomyelitis which had been diagnosed by a Chicago physician, and the diagnosis concurred in by Doctors Edmund Andrews and Christian Fenger, in consultation. At operation, the vascularity of the bone was found to be greatly increased, and the cavity distended by a purulent accumulation. The seat of the inflammation was found and scooped out, and the dead bone was removed. A good recovery ensued, but the bone was fractured shortly after. One of my father's cases comes to mind in which he was obliged to amputate the tibia. I dissected the tibia and prepared it so it showed beautifully the involucrum, sequestrum, cloaca, et cetera, the sequestrum being very large and extending the whole length of the bone, so that by moving its upper end the lower end was moved also. There were many sinuses formed. The specimen is now in the college museum.

Doctor Williamson: There is no question but that early diagnosis and active treatment are very important in this disease. I remember a case seen in my student days which resulted disastrously through too conservative treatment. Several operations were performed where one would have been sufficient.

Doctor Maire asked how soon inflammation would occur after the causative injury. Answer: Sometimes in a week.

Doctor Ayers had seen a case—multiple—which died at eighteen months of age, a Polish child.

Doctor Wyman: I did not say what I wanted to in my paper. I wished most emphatically to lay stress on the importance of early diagnosis. I have seen three fatal cases. Nearly all are at first diagnosed as rheumatism. Persistence of pain in one locality should arouse suspicion. Any change in the circulation will modify the pain of rheumatism, but, in osteomyelitis, the limb must be raised or pressure must be brought directly over the diseased spot in order to modify the pain. Percussion is a valuable aid, in that deep-seated pain is more easily discriminated thereby. In osteomyelitis a patient will wince under it, even when pressure is not painful. Then the constitutional effects are much greater in osteomyelitis than in rheumatism. The temperature will range from 103° to 105° Fahrenheit. These cases occur sufficiently often to require that we should keep them well in mind. They used to be called a scrofulous condition of the bones. There is no swelling, perhaps, but rapid pulse and anxious countenance. Sometimes rest, iodine, et cetera, cause temporary improvement, but I insist that these cases should not be temporized with.

STATED MEETING, FEBRUARY 26, 1895.

The President, ARTHUR H. BIGG, M. D., in the Chair.
Reported by W. B. SPRAGUE, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Aaron read a paper entitled "Methods of Recording in the Lying-In Hospitals of New York." (See page 361).

Doctor Hitchcock: I agree with the writer that systematic records are valuable, and we do not, as a rule, keep full enough records of our cases. But such records as these that he has presented have place for practical use only in such hospitals as those where they were formed. There is no time in a busy practitioner's work for such extensive detail. The man who attains success in his work, must be able to select and record only the salient points of each case.

Doctor Connor: My own notion is that the most valuable records are made by men who are able to hold a picture of normal conditions before the mind, and to record only the departures from the normal in their patients. But in such hospitals these very complete records may be of use to statisticians in after years. It is the very exceptional doctor who keeps a record of the abnormalities that come into his practice. This is very unfortunate. The profession would be greatly benefited could every doctor be brought to record and publish the interesting abnormalities that come to him. So the spirit of Doctor Aaron's advice is important and profitable. There are three things that physicians should learn to do, namely: (1) to observe; (2) to do; (3) to record.

Doctor Bigg: I congratulate the doctor on his paper. His remarks upon the desirability of being more elaborate in our case-taking are well put, and I endorse them all. I was reminded of my own experience. I began by recording the stature, physiognomy and appearance of my patients, thinking meanwhile that that would amount to nothing, but a year or two later I found these same notes of intense interest to me. I always condemn myself for not making more complete records. I shall make the subject of the paper an excuse for relating a recent experience, although it is somewhat of a digression. Two weeks ago I was called by a gentleman to see his wife. He had married about the holidays, and the menses had not appeared since. She was opposed to becoming so soon a mother, and persuaded him to take her to a physician for relief. The physician first prescribed, and afterward, on two separate occasions, used a sound and introduced a catheter into the womb, leaving the latter *in situ*. I found the womb enlarged, but no potency of the os, and I at once set about averting the result they had desired, but unsuccessfully. When, after a few days, I found abortion inevitable, I tamponed the vagina and next morning removed the whole product of conception with the tampon.

Doctor Maire: I have found it very helpful to refer to my notes of cases, and think it desirable to be very accurate in our records. It is advisable to record variations in pelvic diameters, et cetera.

Doctor Aaron: I think the blanks are valuable as a guide in our observations. I think we ought to keep very careful records, though not necessarily so elaborate as these.

EDITORIAL ARTICLES.

THE FORTHCOMING MEDICAL MEETING IN DETROIT.

The twenty-first assembly of the Mississippi Valley Medical Association, which will convene in Detroit on September 3, 4, 5 and 6, promises to be a very successful affair. The preliminary program has already appeared and contains the titles of over eighty papers and addresses, the subjects of which seem to be sufficiently diversified to include all departments of medicine and surgery. Visiting physicians will be accorded the opportunity of seeing and hearing some of the eminent medical men of this country, such notables as **Pepper**, **Wyeth**, **Murphy**, and **Bernays** having signified their intention of participating in the deliberations. The announcement that the Address on Medicine will be delivered by **Doctor William Pepper** conveys the assurance of a masterly production, while the Address on Surgery, to be pronounced by our own **Doctor McGraw**, will unquestionably be an exhaustive résumé of the subject.

This association sustains the reputation of being conducted in accordance with scientific principles. It is said that the consideration of questions foreign to the domain of medical science is strictly prohibited. If this be true, it augurs well for a profitable meeting, and members of the profession in Michigan who lend their presence to augment the gathering will undoubtedly be highly edified by listening to the various ideas advanced in the papers and amplified in the discussions.

EDITORIAL BREVITIES.

THE ANTITOXIN TREATMENT FOR DIPHTHERIA.

THE committee of physicians appointed to test antitoxin in the treatment of diphtheria, and report their experience to the Grand Rapids Academy of Medicine, have rendered the accounting published in another part of this issue. The uniform success attained contributes to establish the efficacy of this new therapeutic agent. DOCTOR KING cites a series of four cases, with the result of three recoveries. DOCTOR SPENCER treated a mother and her three children, and was rewarded by the uninterrupted recovery of them all. DOCTOR CREBS records three cases, in all of which cures were effected. In the discussion which followed the report of this trial, DOCTOR WELSH related having recently treated forty-four cases at Saint John's Orphan Asylum with the old-time remedies—quinine, whisky, iron, and sulpho-calcine—and saving forty of the patients. While the majority of published reports tend to inspire confidence in the antitoxin treatment of diphtheria, still many clinicians, notably Germans, speak disparagingly of the remedy, and some even emphatically deny its virtue.

THE INDEX MEDICUS.

IT is gratifying to know that there is a probability of this useful publication being resuscitated. DOCTOR C. E. SAJOUS has proposed a plan for sustaining the enterprise which seems to have aroused great interest. It consists in procuring two hundred subscribers who will each contribute twenty-five dollars per year. As the outcome of correspondence between DOCTOR BILLINGS, librarian of the Surgeon General's Office at Washington, and MR. MCALISTER, librarian of the Royal Medical and Chirurgical Society at London, a determined effort will be inaugurated to enlist the requisite number of supporters to this worthy project. The United States is expected to provide, according to the apportionment, one hundred and twenty subscriptions, Great Britain sixty, and the continent twenty. There certainly are enough public-spirited physicians in this country to readily supply the desired quota, and it is to be hoped that the movement will receive their substantial encouragement.

ANOTHER EXCELLENT ACQUISITION.

IT is with pleasure the announcement is made that The Physician and Surgeon has been selected to be the official organ of the Detroit Academy of Medicine. This organization was established in 1869, and includes many of the prominent physicians of Detroit. It convenes biweekly, and the papers and discussions presented at the meetings are manifold and important. Henceforth this material will be published exclusively in The Physician and Surgeon, the first installment appearing in the present issue. This latest acquisition to an already extensive original department is calculated to still greater enhance the value of the journal, and render it indispensable to physicians who desire to keep abreast with medical practice as reflected from the forum of medical societies in Michigan.

IMPORTANT MATTER CROWDED OUT.

THE regular quota of original contributions usually published in this journal is greatly augmented in the present issue, necessitating the omission of several other departments, for the sacrifice of which ample compensation is given.

MEDICAL NEWS.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

THE following is the program for the Detroit meeting of this organization. Arrangements have been made whereby those attending the meeting can secure a round trip ticket, on the certificate plan, for one and one-third fare:

TUESDAY, SEPTEMBER 3.—10 A. M. AND 2 P. M.

Medicine.—Hughes, C. H., Saint Louis, Spot Specialism; Burr, C. B., Flint, Michigan, The Paranoiac—A Menace to Society; Babcock, Robert H., Chicago, Some Considerations with Regard to the Senile Heart; Porter, W. H., New York, New light on the Rôle which Iron plays in the Physiological Economy; Thornbury, Frank J., Buffalo, Auto-Intoxications; Pope, Curran, Louisville, Epilepsy, and Some of its Allied Conditions; Taylor, J. H., Indianapolis, How Shall We Rear Our Babies?; Love, I. N., Saint Louis, The Bicycle from a Medical Standpoint; Church, Archibald, Chicago, A Neurotic Form of Wry Neck; Billings, Frank, Chicago, Intercostal Neuralgia; Buchman, A. P., Fort Wayne, Indiana, Psychology in Medicine; Helm, Charles J., Peru, Indiana, The Nervous System as a Factor, from the Standpoint of a General Practitioner. *8 P. M.—Address on Surgery,* Theodore A. McGraw, Detroit, Michigan. *9. P. M.—Reception at the Russell House.*

WEDNESDAY, SEPTEMBER 4.—9 A. M.

Surgery.—Wyeth, John A., New York City, Inflammation—A Process of Repair in the Tissues; Cole, Carter S., New York City, Ulcers of the Leg—All can be Cured; Weber, W. C., Cleveland, Carcinoma of the Stomach; Cale, George W., Saint Louis, Two Successful Operations for Insanity, with Remarks; Lanphear, Emory, Saint Louis, Trephining the Spine for Pott's Disease, with Report of Eight Cases; Bernays, A. C., Saint Louis, The Results and Conclusions Derived from an Experience of One Hundred and Sixty-five Appendicectomies; Maass, F., Detroit, The Comparative Value of Medical and Surgical Treatment of Appendicitis; Murphy, J. B., Chicago, Peritonitis; Dunning, L. H., Indianapolis, Indiana, Tubercular Peritonitis.

WEDNESDAY, SEPTEMBER 4.—2 P. M.

Gynecology and Abdominal Surgery.—Price, Joseph, Philadelphia, The Revelations of the Trendelenburg Position; Groner, F. J., A New Phase of Celiotomy; Porter, Miles F., Fort Wayne, Indiana, Celiotomy in Purulent Peritonitis, with Report of Case; McMurtry, L. S., Louisville, The Indications for Operation in the early period of Ectopic Pregnancy; Cordier, A. H., Kansas City, Technique of Abdominal Hysterectomy; Carstens, J. H., Detroit, Michigan, Three Hysterectomies following operations for Pus Tubes; Gilliam, D. Tod, Columbus, Uterine Fibroids—when to Operate; Manton, W. P., Detroit, The Surgical Treatment of Local Disorders in Insane and Neurotic Women; Holmes, Bayard, Chicago, Puerperal Sepsis—When is Hysterectomy Indicated?; Humiston, William H., Cleveland, The After Care of Abdominal Cases. *8 P. M.—Address on Medicine,* William Pepper, Philadelphia.

THURSDAY. SEPTEMBER 5.—9 A. M.

Genito Urinary Diseases.—Belfield, William T., Chicago, Asepsis in Bladder and Prostate Operations; Matin, S. C., Jr., Saint Louis, Retention Cystitis as a Consequence of Hypertrophied Prostate, with Report of Two Cases; Fuller, Eugene, New York City, How to Correctly Diagnosticate Sexual Derangements in the Male; Lewis, Bransford, Saint Louis, The Removal of Persistent Nodules after Epididymitis; Collings, S. P., Hot Springs, Arkansas, Chronic Vesiculitis with Hemorrhage; Forshay, P. M., Cleveland, Pyelitis, with Report of a Case. *Diseases of the Eye and Ear.*—Dench, Edward B., New York City, The Treatment of Acute Inflammation of the Middle Ear and Mastoid Process; Ball, James M., Saint Louis, Ripening of Cataract; Lash, H. M., Indianapolis, Vertigo, with Report of a Labyrinthine Case; Bulson, A. E., Jr., Fort Wayne, Indiana, Toxic Amblyopia due to the Excessive Use of Tobacco; Peterson, Frederick, New York City, The Anomalies of the Ear Degenerate; Stillson, J. O., Indianapolis, Complication in Cataract Arising from Diabetes, Albuminuria, et cetera; Wheelock, K. K., Fort Wayne, Indiana, Rheumatism in its Relation to the Eye; Heflebower, Robert C., Cincinnati, Excision of the Auditory Ossicles.

THURSDAY, SEPTEMBER 5.—1:30 P. M.

Surgery.—Strauss, Leon, Saint Louis, Inguinal Colotomy *versus* Total Extirpation of the Rectum; Van Hook, Weller, Chicago, Wounds of the Peritoneum due to Perforation of the Rectum by Pitchfork Handle; Heddens, J. W., Saint Joseph, Missouri, Radical Cure of Hernia; Link, J. E., Terre Haute, Indiana, Fracture of the Femur; Colter, J. Homer, Chicago, Illinois, Deviation of the Septum; Ridlon, John, Chicago, Illinois, Club-Foot. *Gynecology and Abdominal Surgery.*—Duff, John Milton, Pittsburgh, The Ordinary Duties of the Obstetrician; Pantzer, H. O., Indianapolis, Post-Climacteric Hemorrhages; Norbury, Frank P., Saint Louis, Medico-Legal Consideration of Hysteria; Jenks, E. W., Detroit, Some of the Lost Arts in Gynecology. *4 P. M.—Excursion on the Detroit River, Steamer Promise.*

FRIDAY, SEPTEMBER 6.—9 A. M.

Medicine.—Aulde, John, Philadelphia, The Abortive Treatment of Typhoid Fever; Blech, Gustavus, Detroit, Medicinal Treatment of Typhoid Fever; Wessinger, J. A., Ann Arbor, Michigan, The Therapeutics of Oleo-Creosote and Creosote Carbonate; Cline, L. C., Indianapolis, Laryngitis from a Rhinological Stand-point; Thompson, J. A., Cincinnati, Some Improvements in the Technique of Laryngectomy; Wells, Edward F., Chicago, Pulmonary Tuberculosis—its early Diagnosis; Shurly, E. L., Detroit, Michigan, Treatment of Pulmonary Consumption in Hospitals; Culbertson, J. C., Cincinnati, Treatment of Tuberculosis; Fütterer, Gustav, Chicago, Suggestions Regarding Prophylaxis of Tuberculosis and its Treatment; Patrick, Hugh T., Chicago, Illinois, The Diagnosis of Hysteria; Aldrich, Charles J., Cleveland, Prognosis in Syphilitic Diseases of the Nervous System; Cutter, Ephraim, New York City, The American Diagnosis and Treatment of Fatty Degeneration and its Masquerades; Jelks, J. T., Hot Springs, Arkansas, Treatment of Syphilis; Drennen, C. Travis, Hot Springs, Arkansas, Syphilis and its Treatment; Ricketts, B. Merrill, Cincinnati, The Skin Diseases Amenable to Galvanism; Patrick, Hugh T., Chicago, Illinois, Some of the more recent methods of Staining Nerve Tissue (Illustrated); Brayton, A. W., Indianapolis, The Deeper Inflammations of the Skin.

FRIDAY, SEPTEMBER 6—2 P. M.

Medicine.—Ricketts, B. Merrill, Cincinnati, Local Anesthesia by Faradism; Stewart, F. E., Detroit, Cod-Liver Oil and Cod-Liver Extracts; Potter, Theodore, Indianapolis, Antitoxin Treatment of Diphtheria; Heath, F. C., Indianapolis, Some Sequels of the Grippe; McCullers, E. H., Saint Louis, The Treatment of Paralysis by "Mechanico-Therapeutics;" Kellogg, J. H., Battle Creek, Michigan, What is the Matter with the American Stomach? McCaskey, G. W., Fort Wayne, Indiana, Bio-Chemistry in its Relations to Nervous Diseases; Stewart, F. E., Detroit, Leucomains and Ptomains; Barclay, William F., Pittsburgh, Legitimate Pharmacy; Galloway, William A., Xenia, Ohio, The Psychology of Suggestive Therapeutics; Sterne, Albert E., Indianapolis, Toxicity in Hysteria, Epilepsy and Neurasthenia.

THE ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

The eighth annual meeting will occur at the Auditorium Hotel, Chicago, September 24, 25 and 26, 1895. Following is the preliminary program; the regular program will appear later: President's Annual Address, J. Henry Carstens, Detroit; Relation of Pelvic Suppuration to Structural Changes that may Occur in the Fallopian Tubes, A. P. Clarke, Cambridge; Nephrorrhaphies, George Ben Johnston, Richmond; Detached Fibroids, George H. Rohé, Catonsville; A Clinical Contribution to Lateral Displacements of the Uterus, Edward J. Ill, Newark; Appendicitis, A. Vander Veer, Albany; Intermediate Treatment of Puerperal Sepsis, A. B. Miller, Syracuse; Kraurosis Vulvæ, a Contribution to its Pathology and Therapeutics, H. W. Longyear, Detroit; Report of Three Recent Cases in Gall-Bladder Surgery, Edwin Ricketts, Cincinnati; Subject to be announced, H. E. Hayd, Buffalo; Intestinal Obstruction following Peritoneal Operations, A. H Cordier, Kansas City; Subject to be announced, S. Y. Howell, Buffalo; Cure of Tubal Distention Without Laparatomy, F. A. Glasgow, Saint Louis; Subject to be announced, W. B. Dorsett, Saint Louis; Subject to be announced, C. C. Frederick, Buffalo; Hysterectomy in Bilateral Diseases of the Appendages, giving remote results, Florian Krug, New York. *Discussion.*—Vaginal Hysterectomy *versus* Abdominal Section for Pus Tubes: (*a*) Title unannounced (affirmative), X. O. Werder, Pittsburgh; (*b*) When Shall Hysterectomy Accompany Bilateral Removal of the Appendages? Reuben Peterson, Grand Rapids; (*c*) Pathological and Surgical Contra-Indications of the Vaginal Route in dealing with Puriform Diseases of Tubes and Ovaries, Joseph Price, Philadelphia; (*d*) Title unannounced (affirmative), George H. Rohé, Catonsville. *Discussion.*—Eclampsia Gravidarum: (*a*) Etiology, Frederick Blume, Allegheny; (*b*) Pathology, George F. Hulbert, Saint Louis; (*c*) Title to be announced, W. H. Taylor, Cincinnati; (*d*) Prophylaxis, H. W. Longyear, Detroit; (*e*) Puerperal Convulsions *versus* Insanity, W. P. Manton, Detroit; (*f*) Treatment, J. M. Duff, Pittsburgh; A. H. Wright, Toronto; Thomas Lothrop, Buffalo. Exhibition of various types of Rectal Papillæ, R. T. Morris, New York; Subject to be announced, E. Arnold Praeger, Los Angeles, California; Ruptured Interstitial Pregnancy, L. H. Dunning, Indianapolis; Has Gynecology Received Just Recognition as a Specialty? M. B. Ward, Topeka; Indications for Operation in Puerperal Sepsis, L. S. McMurtry, Louisville; Pneumo-Peritoneum, James F. W. Ross, Toronto; Subject to be announced, J. B. Murphy, Chicago; Subject to be announced, Charles A. L. Reed, Cincinnati; Subject to be announced, M. Rosenwasser, Cleveland.

The Physician and Surgeon

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

SYPHILIS AND CARCINOMA OF THE LARYNX.*

BY WILLIS S. ANDERSON, M. D., DETROIT, MICHIGAN.
LARYNGOLOGIST TO HARPER HOSPITAL POLYCLINIC.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

THESE pathological conditions of the larynx probably give rise to error in diagnosis as frequently, if not more frequently, than any of the many diseases with which this organ is affected. Of the two, carcinoma is less often met with, but the difficulty one has, many times, in differentiating this affection from other conditions makes its consideration important. An early diagnosis of syphilis of the larynx is important, as in this stage it can be satisfactorily treated, while neglected tertiary lesions are often incurable except, perhaps, by radical surgical measures. The treatment of carcinoma of the larynx is much less satisfactory. In advanced cases cure is impossible. The only hope we have, at present, is the early recognition of the disease, and its total extirpation by surgical operation.

The writer's object in presenting this paper is to draw attention to the main facts in regard to these diseases, and to urge the importance of a complete history, a careful examination and an early diagnosis of each case. The following case now under observation illustrates very well a serious tertiary lesion.

* * *

CASE I—LARYNGEAL SYPHILIS.—Mrs. G., aged thirty-three years; native of Canada; widow. She first came under my observation at Harper Hospital Polyclinic, August 8, 1894. Her family history was negative. Her personal history was a long and varied one. She commenced menstruating at thirteen, was married at fifteen, and had her first child at sixteen. Two weeks after confinement she had epileptic convulsions. These have occurred at irregular intervals ever since, the last one five months ago. There was a period of three years without a convulsion, and at no time have they been oftener than two or three times a year. The attacks have been less severe during recent years. There seemed to be a close relation between the convulsions and her monthlies.

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*Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

She felt, every month, just prior to the flow, the aura which, in this case, consisted of sensations in the ears as if they were filled with water. These attacks were often prevented by bathing the head, neck, and chest in cold water. She gave a history of nervous prostration brought on by overwork one year ago. After an illness of two months she completely recovered and remained well until April, 1894. She noticed at that time a soreness in her throat, caused by a slight cold. Hoarseness came on gradually, also odynphagia and dysphagia, with a constant sensation as if she had a lump in the throat. She complained of regurgitation of liquids through the nose. Solids could be swallowed with less difficulty than liquids. This mechanical difficulty of deglutition affected her general nutrition, although her appetite had been good. She had a tickling cough and marked dyspnea. Both symptoms were more troublesome at night.

This is, in substance, the history the patient gave when she first appeared for treatment. The diagnosis of a case from a history like this is impossible, as the aphonia might be due to a number of different lesions. The laryngoscopic mirror alone will give us the clue to a correct diagnosis. The mirror revealed in this cause an unexpected condition. The whole of the mucous membrane of the larynx was infiltrated with new tissue, obliterating the outlines of the arytenoid cartilages. The ary-epiglottic folds, the ventricular bands and to a less extent the vocal cords were involved. This infiltrated mass was uneven on the surface, bright red in color and ulcerated. The vocal cords were congested and thickened, and on attempting phonation, the edges of the bands were brought together for an instant and then separated. The opening of the larynx was narrowed by the infiltrated ventricular bands. The base only of the epiglottis was involved. There was in the pharynx a moderate bilateral congestion of the fauces.

This picture was so typical of syphilitic disease that the patient was questioned with the idea of eliciting from her a definite history of specific trouble. Finally I obtained a distinct history of specific infection four years ago, with some of the characteristic symptoms of the second stage. She was treated, at that time, until all the manifestations had disappeared.

This patient received daily, at first, a spray of 1–5000 bichloride, later, SEILER's solution. Potassium iodide in increasing amounts, and small doses of the protoiodide were given internally. The condition of the larynx improved under this treatment, all ulceration disappeared, the stenosis became less marked, and her general nutrition was better. The dyspnea increased about December 1. Laryngoscopic examination revealed the same to be due to subglottic involvement. A valve-like fold, inferior to the left vocal cord, would partially close the glottis with each inspiratory effort. The potassium iodide was increased, until over one hundred grains were taken daily. The dyspnea again decreased.

The patient soon after disappeared from treatment, and the writer did not see her for about two months, when she again applied to the polyclinic for treatment, on February 14, 1895, suffering very much from dyspnea. She stated that the dyspnea had gradually increased after she had ceased her regular visits to the polyclinic. The larynx, on examination, showed a marked contrast to its former condition. The syphilitic deposit had been replaced by fibrous tissue. The bright red, congested appearance was now changed to a dull gray color, and against a probe felt firm. The vocal bands presented an interesting condition. The cords on phonation could not be brought closely together. On inspiration abduction to any extent was impossible. The cause of their immobility was due largely to an ankylosis of the crico-arytenoid joint.

I next saw the patient at her residence, on the morning of February 18. She had grown worse progressively since seen a few days before. The dyspnea was serious and the breathing rapid. I had her removed to Harper Hospital, and the next morning I intubated the larynx with a small tube. I tried ineffectually to introduce a larger one, but there was too much stenosis. The small sized tube could not be maintained many hours, as the coughing, caused by the collection of mucus, readily dislodged it. She breathed much easier with the tube in the larynx, and had but little difficulty in swallowing. There was no pain or marked inconvenience, except the irritation caused by the string in the pharynx, to which she soon became accustomed.

On the second day I was able to introduce the next larger sized tube, and gradually increased the size until now she is wearing a number ten. She can, at present, breathe easily without the tube. The chink of the glottis is larger and the cords more movable than when she was first intubated. There was ulceration of the tip of the epiglottis when she first entered the hospital, but under the hypodermic injections of iodine, and the local application of Dobell's solution, this has disappeared. The tube is removed daily, the larynx cleared of mucus by a spray of Dobell's solution, and the tube reinserted.

The prognosis in this case is serious. We can hardly expect absorption of this fibrous tissue, and if the intubation is not continued at intervals, contraction will probably take place again. Cure would have undoubtedly resulted, had this case been thoroughly treated when the larynx was first involved.

On April 20 the patient was seen at the polyclinic. Her general health was very much better, with a gain in flesh and strength. Her voice was much improved but still hoarse. No difficulty whatever was experienced in breathing. Examination of the larynx revealed the cords thickened but freely movable; free anteriorly. The arytenoid cartilages and ventricular bands were still infiltrated. No increase of infiltration since intubating.

Syphilis of the larynx occurs in three to fifteen per cent. of all cases of the constitutional disease, according to the experience of the different authorities. These discrepancies are probably due to much less care on the part of some observers than others. The slight symptoms produced in many cases make it very easy to overlook the disease. Laryngeal syphilis occurs most frequently in young adults. While this is the rule, the disease is occasionally found at both extremes of life.

The etiology of the disease cannot be assigned to any distinct cause. The probable exciting factor that predisposes the larynx to a syphilitic attack, is an ordinary catarrhal laryngitis, due, perhaps, to changes of temperature, humidity, abuse of tobacco or alcohol, or excessive use of the voice. Males are more frequently attacked than females. Their more frequent abuse of alcohol and tobacco, and their exposure to the changes of the weather account for the prevalence of this disease among men. Both hereditary and acquired syphilis may affect the larynx.

Hereditary syphilis of the larynx is comparatively rare. It has been observed in the fetus and in infants. Morell Mackenzie states that he has never seen a case in a child under seven years of age, but other authorities describe ulcerative lesions of the larynx as early as two months, and more frequently at the age of five or six years. Occasionally symptoms are deferred until puberty, or even later. LENNOX BROWNE believes that he has seen cases of hereditary syphilis as late as the third or even the fourth decennium. Females are more frequently attacked with hereditary syphilis of the larynx than males, in the proportion of three to two, according to JOHN MACKENZIE.

The symptoms of hereditary syphilis vary with the amount of pathological change. The voice may be merely hoarse, as in simple catarrhal laryngitis, or it may be completely aphonic; between these two extremes any number of variations may be present. Interference with respiration and deglutition vary with the severity of the case. As aids to diagnosis, the accompanying coryza, history of the case, and evidences of syphilitic dyscrasia will be of service.

Acquired syphilis of the larynx is much more commonly met with. While in some cases its importance is not great, and under proper treatment its effects are transient, in other cases, especially in neglected ones, the lesions are extensive, destruction of tissue considerable, and even life may be threatened.

It is difficult to give briefly the pathology of the various lesions that may affect the larynx. It is customary to divide the disease into the secondary and tertiary stages, although there are many intermediate cases that have to be classified arbitrarily.

The more common secondary lesions are condylomata, chronic hyperemia, and superficial ulcerations. Transient hyperemia occurs frequently during the secondary stage, and it is often difficult or impossible to distinguish whether this congestion is due to syphilis or to a simple catarrhal laryngitis. Condylomata and superficial ulcerations often occur during this stage, but they are sometimes overlooked, as they quickly disappear under treatment.

In the tertiary stage gummata, deep ulcerations, diffuse infiltrations and fibroid degeneration are the common lesions.

Gummata usually appear as small round tumors, varying in size and shape, solitary or multiple, at first red in color, later—as the result of increased pressure of the submucous tissue—of a yellowish tint. The histological structure is the same as of similar deposits in other parts of the body. The masses, as they grow larger, are apt to become necrotic with the formation of ulcers, which often involve the perichondrium and underlying cartilages, and are of the deepest and most destructive kind.

Tertiary ulcerations are characteristic of the later stages of laryngeal syphilis. They often produce great loss of substance and consequent deformity of the larynx. They may occur in any portion of the larynx, but the epiglottis is more commonly affected than the other structures.

Diffuse infiltration, with the formation of new tissue in the stroma of the mucous membrane, may cause a marked thickening and narrowing of the caliber of the larynx, and later this tissue, in a certain number of cases, tends to undergo fibroid degeneration, that is, a gradual development of fibrous tissue in the structures of the larynx.

Stenosis of the larynx is produced by the contraction of this new-formed tissue, and also by the formation of large, dense, fibrous tumors.

The symptoms of stenosis of the larynx are so well illustrated by the case of fibroid degeneration reported, that repetition seems unnecessary.

Cough, which is so characteristic of tuberculosis of the larynx, is unusual. The absence of pain when the patient is not swallowing distinguishes it from tuberculosis and malignant disease. The development of the ulcers in syphilis is acute, while in tuberculosis it is slow. In carcinoma it is intermediate in time between the two. In tuberculosis the mucous membrane is pale and the infiltration uniform in character. In all cases of doubt antisyphilitic treatment should be thoroughly tried.

* * *

CASE II—CARCINOMA OF THE LARYNX.—N. G., male, aged forty-four years; American; letter-carrier. He came to the polyclinic on December 1, 1891, for treatment. He gave a good family and personal history. The only point of interest was that he had had goitre for eighteen years previous to this throat trouble. Eight months before coming under my care he noticed, as a first symptom, a burning pain inside of the throat, then a swelling over the thyroid gland, with painful deglutition. At times, he would cough up a small quantity of blood. The swelling of the thyroid gland continued to grow larger, was soft to the touch, and finally, three months after the initial symptom, it ruptured internally. A large amount of pus, with some blood, was coughed up, relieving the patient considerably for a short time. After the evacuation of the pus the goitre almost entirely disappeared, but the swelling soon commenced again. He would frequently cough up pus, which would temporarily decrease the size of the tumor. When first seen by the writer, there was a well-defined bilateral swelling of the thyroid gland, soft and fluctuating; skin non-adherent; not sensitive when handled; lymphatic glands of the neck enlarged, of firm consistence, tender to the touch, with no fluctuation. The right side was more involved than the left. The patient complained of a dull pain in the submaxillary region, radiating, at times, to the right ear. The cachexia was evident and the marked emaciation was due largely to lack of nutrition, consequent on the painful deglutition. His voice was hoarse. He expectorated a large amount of thick, purulent sputum; bowels constipated; fetid odor to breath; tongue thickly furred; dyspnea and tendency to syncope on exercising.

Laryngeal examination revealed a nodular growth, involving the ventricular bands, arytenoid cartilages, base of the epiglottis and adjoining structures. Ulcers could be observed on the surface.

After being treated a few days at the polyclinic he was admitted to Harper Hospital and came under the care of DOCTOR SHURLY, where the writer had an opportunity of observing the patient until his death. He improved for a short time after entering the hospital. The ulcers healed under a spray of sodium formate. The glands of the neck steadily increased in size, as did also the inter-laryngeal growth. Record taken February 2, states that the aphonia was complete; deglutition very painful; dyspnea present, but not especially marked. The laryngeal tumor had greatly increased, involving all the structures of the larynx and the greater portion of the epiglottis; surface nodular, but not ulcerated. The patient grew steadily worse, dyspnea and odynphagia increased, mental hebetude became marked, and with a laryngeal mirror it was impossible to see any opening in the larynx. Death occurred May 18, 1892.

Necropsy.—The body was extremely emaciated. On the right side of the neck was a large, solid tumor, ulcerated on the surface at several points. The laryngeal tumor involved all of the structures of the larynx, the epiglottis and the substance of the tongue, especially about the base. The thyroid gland was enlarged, infiltrated by the carcinomatous mass, and on section was found to contain pus. This photograph, taken by DOCTOR P. M. HICKEY, a short time before the patient's death, shows well the tumor on the right side of the neck. I am indebted to DOCTOR SARGENT, of Harper Hospital, for a section of the tumor, which may be seen under the microscope.

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CASE III—CARCINOMA OF THE LARYNX AND LUNG.—Wm. T., aged fifty years; machinist; American. His family history was negative. The only point of interest in his personal history was that he had been a hard drinker. A few months prior to his coming under my care he had been drinking heavily, and he dates his trouble from that time.

When first seen by the writer in November, 1891, he complained of cough, hoarseness, dyspnea on exertion, odynphagia, emaciation, and loss of strength. He was unable to take food in sufficient quantities to maintain his strength and flesh. He had rather go hungry than to endure the pain and effort attending each act of deglutition.

Examination.—The patient had a cachectic appearance, and emaciation was marked; dullness over the greater portion of the left side of the chest, and in the infraclavicular region on the right side; bronchial breathing over the consolidated portion; mucous râles over both lungs. Largyngoscopic examination of the larynx revealed a diffuse hypertrophy of the mucous membrane, with a nodular growth, apparently mainly involving the ventricular bands. The surface had a congested appearance. When first seen there was not enough stenosis to account for the patient's dyspnea.

Insufflations of iodoform and morphia enabled him to take some food and drink. His condition grew worse and soon he was unable to take any solid food. Milk could be swallowed easier than water, but even that only with great pain and difficulty. Auscultation of the esophagus posteriorly, when the patient swallowed, was negative. On auscultating over the trachea anteriorly a distinct click could be heard during deglutition. The dyspnea constantly increased and emaciation and cachexia grew steadily worse. We could not detect at any time thickening over the larynx or involvement of the cervical glands.

He was admitted to Harper Hospital and placed in the laryngological service. He improved temporarily after entering the hospital, but soon grew rapidly worse. A laryngoscopic examination, made shortly before death, showed a marked degree of stenosis of the glottis. Early on December 8 he had a severe hemorrhage, accompanied by dyspnea, and soon died of interference with respiration.

Necropsy, held the day he died, did not reveal any glandular enlargements in the neck. The larynx showed infiltration and thickening about the ventricles and vocal bands; epiglottis not apparently involved. The amount of stenosis shown on laryngoscopic examination before death was much greater than postmortem examination proved. Edema of the larynx led to error in this case. The trachea was very much dilated.

Chest examination: Strong adhesions between the pleural surfaces on both sides, more marked on right; upper portion of right lung studded with tubercular nodules. The left lung was infiltrated with a cartilage-like mass, involving the greater portion of the lung. The lower portion did not seem to be very much affected. It is to be regretted that a microscopical examination was not made, but macroscopically it had the appearance of carcinoma.

These two cases illustrate the main features of this serious disease. The etiology of this affection, like all malignant tumors, is unknown. One point ought always to be considered, that is, the possibility of a benign growth taking on a malignant character. Many cases have been reported where an innocent growth has been removed from the larynx, and later a malignant tumor has appeared at the same point. The question naturally arises as to whether or not there was an error in the first diagnosis. While error has undoubtedly occurred in some instances there are enough cases recorded by competent observers, in which histological examination showed the growth to be an innocent one, and in which subsequent examination of the second growth proved it to be malignant. It has also been proved that repeated irritation by strong local applications or endolaryngeal operations on benign growths of the larynx may cause their degeneration into malignant growths; also that malignant tumors may be excited to greater activity by irritation. These facts ought always to be borne in mind in the management of these cases. One is not justified in removing a portion of suspected tumor for examination, unless he has obtained the consent of the patient for a radical operation, should the miscroscope demonstrate it to be a malignant growth. Carcinoma of the larynx occurs, as in other parts of the body, usually in advanced life.

The symptoms of carcinoma are very well illustrated by the cases reported. They vary according to the stage and the site of the disease. Pain is a constant, and toward the last, a distressing, symptom. At first it is confined to the larynx, but as ulceration commences it may radiate to the pharynx, orbits, forehead, neck and ears, the latter situation occurring very frequently. The pain in the ears, although a constant phenomenon, is not diagnostic of cancer, as it is commonly observed in tuberculosis and occasionally in syphilis of the larynx.

Hoarseness is usually an early symptom, although complete aphonia, as is so often observed in tuberculosis of the larynx, is rarely present until the later stages.

Dyspnea is always present in the intrinsic form, but varies according to the structures involved, and the amount of infiltration. In the later stages severe paroxysms of inspiratory dyspnea often occur.

Cough is not a prominent symptom until the ulcerative stage is reached, then severe attacks, accompanied by hemorrhages, may take place.

Dysphagia and odynphagia are prominent symptoms during the later stages of the intrinsic type, and in all stages of the extrinsic.

There is a marked fetor of the breath with the ulceration, and hemorrhage which—when serious is almost pathognomomic of cancer—may be met with.

Accompanying these local symptoms we have the constitutional ones, which may be summed up in the term "cancerous cachexia." The cachexia of carcinoma of the larynx is not present so uniformly as in malignant disease of other parts. The explanation given by MORELL MACKENZIE is, that the connection of the lymphatics with the glandular system is not nearly so free as in the pharynx and in other parts.

The two cases reported illustrates the truth of this statement. In the first, where the thyroid gland was primarily the seat of the disease, the lymphatic nodes in the neck were early involved; in the second, where the disease was intrinsic, no glandular involvement was found in the neck at the necropsy. LENNOX BROWNE, on the other hand, believes that a careful search will always disclose lymphatic thickening concurrent with the commencement of ulceration.

The diagnosis of laryngeal cancer in the early stages is often doubtful. An undefined, irregular swelling on one of the ventricular bands, or a nodulated sessile tumor, giving the appearance of a papilloma, is suspicious of malignant disease, especially if the patient is past middle life, and does not give a history of syphilis, tuberculosis, or severe chronic laryngitis.

In considering the treatment of all cases of malignant disease of the larynx, and of those cases of syphilis that have passed beyond the reach of medicine, it is well to consider what relief we can offer our patients by surgical measures, and whether, in any considerable number of cases, we can hope to bring about a permanent cure. The surgical measures that ought to be considered are, endolaryngeal operations, tracheotomy, thyrotomy, complete and partial laryngectomy.

Endolaryngeal operations in syphilis might properly be performed for the division of bands, and the removal of cartilages loosened by ulceration. In carcinoma of the larynx endolaryngeal operation never ought to be performed, as we never can expect to reach all of the diseased tissue, and the only effect would be to stimulate the growth to greater activity. The unique example of FRAENKEL, where carcinoma of the larynx was finally cured by extirpation by the cautery loop, is an exception.

Tracheotomy is a measure of undoubted value in serious cases. While alone it is never curative, in the majority of cases it prolongs life and promotes euthanasia. It is a comparatively simple operation and, in itself, seldom causes death.

Thyrotomy, or division of the thyroid cartilages, in syphilis, would be indicated where endolaryngeal operation was impossible. In carcinoma it never ought to be performed, for the same reason that endolaryngeal operations are unsuitable.

Laryngectomy, or the total extirpation of the larynx never ought to be performed in syphilitic stenosis. Tracheotomy possesses all of the advantages and few of the disadvantages of laryngectomy.

In carcinoma the case is different. The results in all cases treated symptomatically is death. While many of the distressing symptoms can be relieved and euthanasia promoted by medical means, the disease will gradually extend in all cases until the victim succumbs. If we are able to diagnose cases of carcinoma of the larynx early, before the lymphatics of the neck are involved, we ought to remove, by total extirpation of the larynx, all of the diseased tissue.

KRAUSE, of Vienna, in 1890, reported one hundred and sixty cases of total, and eighty cases of partial, extirpation. These operations were not all for the relief of cancer. Cure is reported in the proportion of twenty-nine per cent. of the complete and eighteen per cent. of the partial. The immediate fatality is stated to be forty-two and forty-three per cent. respectively. These and other statistics encourage us in the hope that cure may be effected when the disease is confined to the larynx.

AN ANALYSIS OF THE DEATHS IN DETROIT, AMONG CHILDREN UNDER TWO YEARS OLD, DURING JUNE, JULY AND AUGUST, 1894, AND THE RELATION OF DIET TO THIS MORTALITY.*

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As we approach the different seasons of the year, we, as physicians, are forcibly impressed with the effects that extremes of temperature, equability of temperature, and sudden changes of the same, produce not only in the amount of sickness, but also in the character of that sickness. While there is a moderate amount of mixing of all kinds of ailments, through the whole year, yet there is a positive determination or increase of certain maladies at seasons peculiarly their own. Almost all forms of sickness are more common at one season than another. Thus we find an increase of throat and lung troubles with the advent of the cold winds and rain of the fall season; likewise do we look for a decided increase, or commencement even, of typhoid affections with the first liberal rains following the hot summer months. Again we find old rheumatic affections and eczematous troubles increased as the demand for more clothes becomes paramount for our comfort. Our epidemic and contagious diseases even show some slight preference at times for the cold or the hot seasons. Perhaps in this temperate zone, the most marked seasonal preference shown by diseases are those of the digestive organs for the warm months of June, July and August. After this perhaps the acute affections of the nervous system show a preference most marked. They also are markedly increased during these hot months, and seem to some physicians to be so closely related to the digestive disturbances, that there is great difficulty in many cases in disassociating them from each other. Having experienced this difficulty for many years, and being still unable to see clearly the relationship, it continues to be an interesting subject at the bedside of sick children every summer; and with the approach of the heated term, so do our thoughts revert to this annual subject for attention. Under the older teachings various causes were assigned for the summer increase in digestive troubles, as also for those of the brain and nerve centres. With our more recent ideas we are now finding a solution, as we believe, in the germ theory, for the digestive disturbances. As yet we cannot clearly embrace the nervous affections in those omnipotent germicidal arms, but feel that there largely they belong. Were it possible to see clearly the connection between digestive and nervous affections in children, we could possibly solve the cause of the latter to our better satisfaction.

Worrying over this difficulty, and also desiring more perfect data on which to form opinions in prescribing the diet and medicine for my sick children, I thought it well to collect some statistics from facts around us all. Accordingly I obtained from the Health Office of Detroit, in September, 1894, a complete list of all the children two years old and under who died during June, July and August, of that year. This list I placed in the hands of Doctors Reilly and Kempf, then senior students in the Detroit College of Medicine. These gentlemen made a thorough canvass of these cases, going from house to house, and inquiring carefully into the history of each case. These inquiries were divided into columns calling for name, age, cause of death, previous diet, length of sickness, and previous sicknesses if any. In no case was any inquiry made about the treatment or what physician attended the case. With these matters we had no right to associate our investigation. As the health office report gave names, ages, and cause of death, as reported by the attending physicians, it was only necessary to inquire carefully into the dietary, length of sickness, and previous sicknesses, if any, in each case.

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*Read before the Detroit Medical and Library Association.

The whole list comprised 477 cases. Among those cases were many that would be of no practical application to our method of investigation, that is, their sickness and death could not in any way be traced to the diet. Such are cases dying from the effects of birth, from erysipelas, syphilis, tumors, et cetera. While these cases are interesting from a statistical stand-point, we can only take notice of the more common and numerous ones here.

Of these cases only sixteen died of the contagious and epidemic diseases of childhood. These included diphtheria, scarlet fever, whooping-cough, and measles. This is a very gratifying result, and tends to show the warm weather as antagonistic to these affections.

From affections of the respiratory organs there were forty deaths or over eight per cent. These cases were mostly reported as pneumonia, and seem a larger proportion than we should expect, in the hot weather. When we remember that few children die from respiratory tuberculosis, we realize that most of these forty cases were from acute affections, mostly pneumonia and bronchitis. This proportion is about one in every twelve cases.

If we now turn to the brain and nervous system we find there were 125 fatal cases. This, out of a total of 477 deaths, makes a little over one in every four cases. These deaths were reported as meningitis, hydrocephalus, cerebro-spinal meningitis, spasms, and convulsions. Much the larger number were reported as convulsions; and the greater number of these also were reported as accompanying other affections, principally cholera infantum, diarrhea, and vomiting. Being impressed with this large number I tried to analyze them, if possible, hoping to obtain some information thereby. This effort was a failure, as the different ways of reporting by so many physicians left only one conclusion possible—that of those dying under two years old one in every four children, at least, died showing lesions of the brain or nerves. It is fair to infer that this proportion is not an exaggeration, but more likely to be less than the actual number who suffered from this form of trouble, either alone or complicated, as many cerebral cases would not be detected in their early stages. While we recognize this large proportion of brain and nerve complications in children dying under two years old, we are prepared for a much larger proportion of deaths when we turn to those children who suffer from digestive derangements and their intestinal results.

Under this division of mortality, I thought it desirable to divide the cases into those who died between birth and one year old, and those dying between one and two years old. I did this as I wished particularly to compare the mortality of the hand-fed with those who nursed their mothers. Of the whole number 477, 294 died during their first year of stomach and bowel affections and 43 died when between one and two years of age of the same complications, making 337 in all out of 447. Of the 294, dying during their first year, 244 were hand-fed and 50 were nursed by their mothers only, or were so reported, without any other diet. While there is no apparent reason for doubting the number on hand-feeding, yet we know by experience that there are few children carried to one year old who are not hand-fed more or less also. We all know that mothers frequently count nothing on the occasional meal or drink of milk given the little one, when it is not made a regular or considerable part of the child's diet. This being the case, the correct proportion of "hand-fed" to "nursed only" children is likely to be greater than 244 to 50, rather than less. I am the more convinced of this, inasmuch as a few children nearly two years old were also reported as only nursed and not hand-fed anything, yet dying of cholera infantum or other bowel troubles.

I made no effort to separate the "hand-fed" and "nursed only" in those children over one year old. This course I followed as I have no confidence in reports of "nursing only" in children of such age, and did not think anything reliable could be obtained from such division. My own experience is that very rarely is a child confined entirely to the breast when a year old or more. All are fed more or less at times.

The interesting and striking feature of the above figures is the immensely increased mortality in children "hand-fed" during the first year. This amounts to five times as many as in the nursed children and is a fact which we should all consider when called upon to prescribe the diet for the new-born or young child. This matter is of immense importance at this season of the year, as the younger the child is the less able is it to digest foreign diet in hot weather and so correspondingly greater will be the mortality.

Another interesting fact brought out by the above figures, is the increased danger during the first year. It is a generally accepted belief among the people that greater danger accompanies the second year than the first, but those figures show that nearly seven times as many children die from stomach and bowel troubles during the first year as do during the second. When we look at the proportion dying among those nursing in the first year we find it fifty. Now, this against forty-three of nursed and fed in the second year still shows the greater danger during the first year. I think this inherited idea of greater danger during the second year safely applies to successfully nursed children who, of course, are. more exposed to danger after weaning in the second year than while nursing during the first year.

The most marked lesson taught by the above facts, is that children should be nursed, not hand-fed. I am fully alive to the difficulties attending this decision in many cases, but am also satisfied that in many cases these difficulties are produced by the impression many mothers unfortunately have, that a hand-fed child is as well if not better off than a nursed one. Under this false impression they very readily resolve not to nurse the baby, or if nursing it soon to wean it. Statistics show that six times more nursed children are well developed than fed ones, and that they are well developed in proportion as they are well nursed. The above figures show also that their lives are five times safer when nursed than when fed. Now, if six times more children are well developed and their lives five times safer from disease and death when nursed than when fed, it surely becomes the duty of physicians to carefully and persistently inculcate these facts upon their patients, and thus gradually counteract the false knowledge and large mortality which surrounds us every summer.

From the above we arrive at the following deductions:

During June, July and August, over seventy-five per cent. of our deaths in children under two years old occur from stomach and bowel complications.

Over eighty-seven per cent. of these deaths occur during the first year.

Of this eighty-seven per cent. fully eighty per cent. are hand-fed children.

Of the whole number dying twenty-five per cent., or one in every four, shows cerebral or nerve complications alone or complicated.

Of the total deaths one in every twelve is caused by diseases of the respiratory organs.

About seven times more children die from stomach and bowel affections during the first year than during the second year.

Of those children dying from cerebral and nervous complications one-fifth die during the first month of life.

Of the whole number dying from cerebral and nerve complications sixty per cent. are hand-fed and forty per cent. are nursed by their mothers.

These results would show that hand-feeding produces its bad results and increased mortality through lesions of the digestive organs principally.

A FEW NOTES ON THE THERAPEUTICS OF THE NASAL PASSAGES.*

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I TRUST that the shortcomings of this paper may be pardoned by my auditors in appreciation of its brevity.

Therapeutics devoted to the amelioration or cure of diseased conditions of the nasal chambers are to be divided into two great groups—systemic remedies, and local remedies.

Systemic medication in the treatment of perverted conditions of the mucous membrane of the upper respiratory tract is too often disregarded by the medical adviser in his anxiety to carry out the local treatment. In this he is unwise, as the more brilliant results are attained by a careful attention to the combination of the two avenues of attack, than by having recourse to one alone.

The reconstructive agents will be found most valuable in appropriately selected cases where the nasal trouble is to be regarded as symptomatic of the general depression of the physiological functions. Cod-liver oil, the hypophosphites, et cetera, will do more for the cure of rhinitis in scrofulous children than any simple local application.

In dispensary work, at least, the denial of a former specific infection should be no cause for delaying antispecific treatment where the clinical manifestations point in that direction. Beginning perforations should almost invariably be considered and treated as tertiary manifestations.

In eczema of the nose occurring just at the junction of the integument and mucous membrane, and associated with an interstitial keratitis, the effects of the syrup of the iodide of iron in appropriate doses are most stricking. Such cases which are so frequently met with in a dispensary practice among children of low vitality are rarely benefited by local applications alone.

The striking effects of good food and fresh air were observed last summer when several children suffering from a mucopurulent rhinitis conditional upon a constitutional depression were sent out to the Lakeside Home at Grosse Pointe, where under the stimulating effects of out-door life and proper nourishment their general condition rapidly improved and the nasal trouble disappeared.

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* Read before the DETROIT ACADEMY OF MEDICINE.

Fowler's solution either in aqueous form, or in the more convenient tablet, has been found to be an agent of great therapeutic value in cases where the mucous membrane seems to lack tonicity in the nose as well as in the lower respiratory tract.

Cases characterized by vaso-motor disturbance, resulting in a turgescent condition of the blood-vessels and tumefaction of the mucous membrane of the turbinated bodies are benefited by tonics, particularly by strychnine in full doses.

Where impaired digestion is found to co-exist with rhinitis the former will often be proved by stomachic medication to exist in an etiological relation to the respiratory disorder.

Pharyngeal and laryngeal cases manifesting rheumatic trouble as a complication, or as an etiological factor, derive great benefit from the lithia salts, not given in the ordinary lithia waters where the dose is homeopathic, but in some of the various salts of the metal which are now on the market in eligible form.

These desultory remarks upon systemic medication in certain types of nasal cases are made simply to emphasize the fact that the patient should be examined and treated as an entity. He is to be looked at not merely through the nasal speculum of the specialist, but with the eye of the general practitioner. He is to be treated not simply with a spray or powder but with the idea that the disorder of the mucous membrane is perhaps only symptomatic of the lack of an harmonious adjustment in his physiological well-being.

In considering the local remedial measures for the nasal passages we may consider first the medical and then the surgical.

Of prime importance, and hence to be classed in the first list of medical agents, are the cleansing solutions. The natural secretion of the mucous membranes increased in catarrhal conditions must of course be removed before any astringent or stimulating application is made. There is our old friend, Dobell's solution, which has been in use for so many years as a solvent of mucus and as a stimulating spray. The Seiler solution, so easily prepared from the tablet, is a much less irritating preparation, and one which is quite as efficacious. Sensitive patients often complain bitterly about the use of Dobell's solution and if we, by substituting for it some less painful application, cause our patients less discomfort we have made a step forward in treatment. In cases where the discharge has a purulent character the use of a very weak solution of peroxide of hydrogen, one to twelve or fifteen, rendered alkaline and freshly prepared at the time of using, enables us to very thoroughly cleanse and disinfect the nasal chambers. In atrophic rhinitis the diluted peroxide solution serves a double purpose, eliminating the stench by breaking up the decomposing matter, and helping—by the liberation of the gas and the consequent formation of bubbles—to loosen the crusts. The cotton-tipped probe is of the greatest service in dislodging these dried masses and wiping away strings of tenacious mucus. The cotton-tipped probe and the post-nasal syringe are two instruments whose use seems to be too little appreciated. In atrophic rhinitis it is almost impossible to effect a thorough cleansing without having recourse to some mechanical means for loosening the dried secretion. Where a cleansing application pure and simple is required a spray of bicarbonate of soda, five grains to the ounce, is perhaps the best which we can employ; the addition of a small amount of listerine serves to make the spray more pleasant.

Of the astringents, tannic acid either in aqueous solution or dissolved in glycerine, has been found preferable to the salts of the metals. Menthol dissolved in petrolina oil or in the more costly albolene with the addition of one per cent. cocaine is often useful in reducing tumescent hypertrophies. The double distilled extract of hamelidis combined with an equal volume of a solution of chlorate of potash is a pleasant and mild astringent particularly to be recommended where the hypertrophic condition is recent and comparatively slight. Alumnol, in two per cent. solution, either alone or combined with menthol, and in certain cases with a small percentage of cocaine, is extremely serviceable in relaxed conditions of the larynx.

As a sedative we have recourse most often to tincture benzoin compound administered as a vapor by inhalation from hot water. The solutions of bromide of potash given in spray have not afforded the satisfaction expected from the recommendations of the writers upon this subject.

Among the stimulants are carbolic acid in solution, three grains to the ounce of water. This is ranked by iodine two grains to the ounce of glycerine. Perhaps the most efficacious and least injurious of this class of remedies is the oil of tar either in saturated aqueous alkaline solution, or dissolved in petrolina oil. The oil of eucalyptus is a valuable agent to stimulate the mucous membrane of the entire respiratory tract.

Among the hemostatics of the upper respiratory tract may be mentioned peroxide—a most admirable styptic, antipyrine in solution, tannin and alum. The use of the perchloride of iron, except upon a probe and applied to limited areas, is to be most strongly condemned. A most distressing case resulting from the packing of the nose with styptic cotton, leading to two attacks of inflammation of the maxillary and frontal sinuses, recently came under my observation.

We have mentioned some of the drugs of the nasal pharmacopeia, few indeed in comparison with the long lists of formulæ found in various works upon this subject, but those the writer has found most useful. Of course every worker has his favorite drug or formula for a certain purpose. We have tried to pick out those acceptable to the many and found worthy upon trial.

Of the surgical measures the galvano-cautery is rapidly and deservedly superseding the cauterization by nitric, chromic, acetic, or pure carbolic acid. The ease of manipulation, the limitation of the area operated upon, the slight reaction are the points which have brought this about.

The nasal trephine driven by the dental engine has seemed, during a limited field of observation, to possess as much efficiency as the nasal saw, and not to inflict as much injury upon the adjacent membrane and hence to be followed by less reaction.

The prompt interference with proper surgical procedures, maintaining, of course, a proper conservatism, will go far toward the prompt relief of nasal stenosis with its accompanying troubles in ear, pharynx and larynx, and will tend to do away with so much of the dilly-dally-spray work now used by physicians, and restore the confidence of the public in the ability of the profession to cure catarrh. The public has had so much of the "cóme in to-morrow, please," that it will take some time before it gains the idea that the medical profession knows much about nasal troubles.

PRURITUS CUTANEUS.*

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THE honor you confer upon me in electing me to membership in your Academy compels you by custom to listen to a thesis delivered in the form of an inaugural address. It is my pleasure, then, to present to you to-night a subject to which but little attention has been given, and yet which on account of its many disagreeable and aggravating features, its prevalence and significant relation to other symptoms of cutaneous diseases, merits your thoughtful consideration.

My especial attention during all my years of practice, and of late years my entire attention, has been given to the study of the principles and practice of dermatology. It is, therefore, proper that my address should embody a few thoughts on a prominent factor in relation to certain diseases of the skin.

When we realize the dependence of the skin upon nervous influence for its nutrition and general functional activity, we cannot fail to appreciate the importance of the nervous system in the production of cutaneous maladies or its relation to them; and it is to a form of neurosis that I desire to call your attention.

PRURITUS itself is merely a symptom and as such cannot be dignified by the name of disease; but in the disease to be described it occupies so conspicuous a place that it gives the affection its title, to be modified by the region involved. The affection as a whole has received the indefinite and unsatisfactory name of PRURITUS CUTANEUS.

Pruritus is a form of paresthesia, an abnormality of sensation. As all sensations depend on nerve activity, pruritus is grouped with the neuroses of sensibility, disorders characterized by disturbed dermal sensation without demonstrable change of the skin itself. It is, therefore, a disturbance primarily functional in its relation to the skin, though it may and does reflect an altered state of the nervous system or of some internal organ. What lesions do exist in the skin are secondary in character, the result of irritation produced and aggravated by mechanical means by the sufferer, a fact that can be clinically demonstrated, as the pruritus will continue long after all traces of secondary lesions have been removed. These secondary lesions, when present, are in spite of the scratching sometimes but very slight, exhibiting merely a roughened, hyperemic condition; again, they may be streaked, showing the marks of the nails; and, again, the follicles may be congested, the surface reddened, angry and excoriated, all the evidence of violent agitation.

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*Read before the DETROIT ACADEMY OF MEDICINE.

To refer to pruritus as a perversion of sensation necessitates, to a more perfect understanding of its cause and nature, a dissection of the senses of the skin, to determine the special sense involved. The feeling of itching implies a multiplicity of sensations, suggests an element of objectivity though indefinite, affording consciousness of something in contact with the skin as well as being a purely subjective annoyance. It is, therefore, a sense of a degree higher than that known as common sensation, which is merely subjective, probably the origin by gradual evolution of all special sensation and the only sense of the lowest form of life, existing as a common sensitive exterior.

With the evolution of higher life the specialization of the senses is necessary to prepare the animal for the fight of self-preservation and the reproduction of the species. Of the higher developed senses there is the sense of touch, a sense of composite character, the sense by which we take cognizance of the form, size, temperature and such qualities as softness, hardness and roughness of objects. The sense of touch of itself does not embody all these attributes and would be incomplete without its association with the muscular sense and the senses of temperature, of pressure and of contact, senses that owe their differentiation to the special sense-organs of the skin, special nerve-terminations, the so-called organs of reinforcement. Unfortunately, the exact function of these various nerve-endings is still not recognized. Their association with the sense of touch as a whole is all that is definitely known, but their vital importance to this special sense is undoubted.

The relation of these nerve-endings to the sense of touch is so well described by Doctor Bronson in "Morrow's System of Genito-Urinary Diseases, Syphilography and Dermatology," that I cannot do better than to quote his words: "To evoke the perception of form and quality in the object touched, a certain degree of pressure is requisite; and with this fact in view the term *pressure sense* might be employed for that kind of touch that gives definite presentations to consciousness." . . . But before any consciousness of pressure exists we are sensible of contact. . . . This "*sense of contact* may be regarded as the threshold of the perceptive sense, but is nevertheless but one remove from common sensation. It undoubtedly gives some intimation of an external object and in that respect differs from merely subjective impressions of common sensation. Though no pressure be recognized there must be, even in the slightest contact that can be felt, some movement imparted to the peripheral nerves, effecting some molecular change. There is reason to believe that this primitive sense of contact is the one most subject to disturbance in the sensory anomalies of the skin." These peripheral nerve-endings exist in the skin and are found in numerous quantity in the epidermis, the seat of itching.

In passing I might say the reason given that a slight irritant of an external object will cause itching, while a more forcible pressure is necessary for the sensation of touch, is that the nerve-endings described are in the epidermis while those to which the sense of touch is responsive are more deeply situated. This situation of these nerve-endings in the epidermal layer is further suggested and supported by the fact that those diseases in which the scarf layer is involved are more apt to be subject to pruritus than those in which the deeper layers are primarily invaded. With the former we can include such pruriginous skin affections as eczema, lichen planus, and pemphigus, while in the syphilodermata and the scrofulodermata, whose infiltrations are confined to the true skin, itching is not a marked symptom. In the erysipelatous and phlegmonous inflammations the sensations are of a smarting, burning or aching character, sensations in antipathy to the sense of pruritus; it is only when the epidermis becomes involved that itching becomes pronounced.

Itching is so common among hairy or feathered animals that it acts here in a physiological capacity to induce scratching, dislodging the accumulation of dirt, invigorating the functional activity of the skin, removing the epidermic debris and the impacted sebum and throwing off the deciduous hairs. To a certain extent it performs this salutary service in man, and it is only when by disease or by accessory morbid conditions the desire to scratch becomes so irresistible, destroying all sense of comfort and all efforts at sleep, impairing the general health and amounting at times almost to mania, that the pruritus becomes an important factor and demands our attention. At times a little scratching, rubbing or pressing satisfies the patient; but, again, he resorts without compunction to coarse cloths, brushes, combs and even metal instruments. Why the act of scratching relieves at least temporarily the itching is accounted for in the same way that a violent muscular tremor or agitation will relieve a pent up nervous excitement. *"Scratching relieves itching by directing the excitation into freer channels of sensation, sometimes, especially when severe, substituting for the pruritus either painful or voluptuous sensations."

The sensations of tingling, formication, crawling, creeping and tickling seem more or less associated together, each producing an irresistible desire to scratch. They are probably dependent upon the same nervous irritation, modified by the cause, the region involved and the intensity or some quality of the irritant.

Before going into a detailed description of the various clinical forms involved in pruritus, it would be well to consider several important factors in the production of excessive itching bearing some relation to them all. Probably in each there is a degree of cutaneous hyperesthesia, a condition of excessive sensibility, due to some hereditary, acquired or inherent tendency to this morbid state, in such diseases of the nervous system, for instance, as hysteria; or due to some accidental cause; or the reflection of some more deeply seated lesion. Even in those pruriginous diseases already mentioned, in which there are trophic changes in the skin itself, the pruritus is intensified by the state of hyperesthesia, the result of long continued irritation and scratching. Whether this same condition of cutaneous hyperesthesia follows such systemic diseases as uremia, lithemia or icterus; or whether these diseases cause the pruritus by the changes they produce in the circulating medium, the products becoming irritant and exciting directly the nerve termini in the skin; or whether the changes they produce upon the nerve centres reflect a morbid state to the skin, is still uncertain.

Among the other direct and indirect causes may be mentioned mental emotion and depression and even irritation of the clothing, exposure to the atmosphere, to draughts, or the warmth of the bedding when the skin is in a condition of hyperesthesia; functional disturbances of the gastro-intestinal tract, due to dietetic changes, too stimulating diet, catarrh of the bowels, sedentary habits leading to constipation, worms in children; organic diseases of the

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*Bronson: *The Medical Record*, October, 1890.

viscera, as cirrhosis of the liver, hepatitis, jaundice; diseases of the genito-urinary tract, as inflammation of the kidneys, Bright's disease, vesical calculi, vegetations or polypi of the urethra, stricture of the urethra, diseases of the testes and the epididymis, vitiated sexual hygiene; functional and organic changes of the womb and ovaries, as irregularities of the menses, especially the menstrual anomalies of young girls, utero-gestation, the climacteric; such general diseases as rheumatism, diabetes mellitus or tuberculosis, in the manner described; the action of certain narcotic drugs, as chloral, opium, belladonna, aconite, due to impairment of cutaneous sensibility; disorders of the sensory nerves, impairing the facility for conducting impressions; for the same reason alcoholism, especially just after cessation or during intermission of the customary stimulant. Like responsible for changes of cutaneous equilibrium may be a ptomain, a leucomain or some product of imperfect oxidation. The important office of the skin as an emunctory organ renders it peculiarly open to irritation.

In all these clinical forms the itching may be intermittent or constant, usually paroxysmal, invariably worse in the evening after eating and at night, but at all times usually obstinate, depending on the nature of the cause and our ability to remove it. But even with these known predisposing causes it is at times exceedingly difficult to trace the origin of the pruritus and we must rely a good deal on conjecture and elimination.

We recognize several clinical forms, which, on account of their definite character of symptom and location, are worthy of a separate description. According as it is general or local the affection is termed pruritus generalis or pruritus localis. General pruritus is uncommon and would indicate a central neurosis or a general nervous functional disturbance. However, it is not uncommon for various regions in turn to be attacked, the itching, as it were, jumping from place to place.

Pruritus localis shows preference for certain parts of the body. About the head the scalp or the face may be attacked; when upon the face the nose and the mouth are particularly susceptible; of the trunk the axillæ are liable; of the extremities rarely the palms and soles; but the most common, severe and obstinate forms are in connection with the genital organs and the rectum. Season has some influence producing what is known as pruritus hiemalis, and age succumbs to a more or less general itching, for which reason it is called pruritus senilis. At times it is found in the course of a nerve.

Of the clinical form:

Itching of the scalp, the result of a neurosis or of a reflex irritation, is probably rare. The severe itching to which the scalp is prone can readily be traced to some functional or organic change in the scalp itself. The same may be said of itching of the nose, though it may be a precursory or accompanying symptom of nose- or hay-asthma and often indicates the physiological effect of opium and its alkaloids. The itching of the nose suggestive of worms, especially in children, is familiar to us all. Pruritus of the palmar and plantar surfaces is rare, though it may be found in those suffering from gout, or asthma, or in women suffering from uterine disorders. When present it is usually accompanied with hyperidrosis.

PRURITUS ANI.—The whitish sodden look, the foul secretion, the swollen folds, the deepened furrows and ulcerations, the marked evidences of scratching may be the result of inflammatory changes in the rectum, but may also follow a pruritus dependent on sedentary habits, constipation, obstruction of the portal circulation, pelvic tumors obstructing pelvic veins inducing local congestion, or due to the reflex irritation of disease of the higher regions of the rectum, of intestinal indigestion, or of a long continued irritation of the intestinal canal from any cause, or of chronic prostatitis or of unnatural vices; or may be dependent on constitutional causes, as rheumatism, or on occupation, as it is a common and troublesome affection among boiler makers, plumbers and others who work in the wet or sit on cold iron. I have a patient of rheumatic diathesis, whose itching of the rectum is an almost infallible barometer. From whatever cause it may be constant or intermittent, worse at night, the itching at times being intolerable and decidedly obstinate. Both sexes of all ages are affected.

PRURITUS GENITALIUM.—In the male the *pruritus preputii* is associated with an increased secretion of the local sebaceous follicles. *Pruritus scroti* involves usually the region of the scrotum, but the itching may extend along the perineum to the anus and down the thighs, especially marked at night. As with all the regions of the genitalia the affection is usually aggravated by a concomitant eczema.

PRURITUS PUDENDI MULIEBRIS may be seated in the labia, the clitoris or the vagina, but is usually encountered where the vaginal mucous membrane passes into the labia; it frequently extends to the thighs. It is encountered at any period of life, though more frequently in middle and old age, especially at the climacteric, and may be very distressing and intractable, causing mental and physical dismay. It may be due to the uterine engorgement of pregnancy, to ovarian or uterine diseases. It must not be confounded with other diseases of an itching character so common to this locality; but even here it is often the concomitant of some general morbid condition, as lithemia, glycosuria, that tends to render morbid the local secretion. In children it is often caused by worms in the bowels either by reflex irritation or by contact, the worms migrating from the rectum to the vagina.

In young girls a state of hyperesthesia in these parts tends to a perverted sexual hygiene, leading to onanism and nymphomania. The same condition of pruritus of the genitals in the young man results in orgastic effects and pollutions, degrading to the morals.

The pleasurable, voluptuous sensation, the sexual excitement that accompanies the scratching in pruritus of the genitalia and induces its continuance, is accounted for by the fact that, though the seat of the sexual passion lies in the organs selected for the purpose, the reproduction of life is so necessary to its existence that the aphrodisiac sense is not confined to these organs but is more or less distributed over the body, certain regions being especially responsive to the excitement.

PRURITUS SENILIS.—With age come the general signs of decay with all that this implies; changes of general nutrition, impairment of all the vital functions, sluggish action of the emunctories, imperfect oxidation and the changes suggested by the general term arthritism. Coincidently we have atrophic degeneration of the skin and its appendages, of the subcutaneous tissues and of the cutaneous nerves, resulting in loss of elasticity and of fat, atrophy of the glands, thinning of the corium and of the epidermis, leaving the skin shrunken and wrinkled. Thus the tone of the skin is impaired, rendering it hyperesthetic or devoid of sensibility and subject to pruritus on exposure to the air, a change of temperature, a change of clothing. The affection is very obstinate and at times severe. Reflexly it may be caused by indirect methods already explained.

Pruritus Hiemalis, described for the first time by **Duhring** in 1874, is now generally recognized and classed with other clinical forms of pruritus. As the name suggests it is dependent upon atmospheric influence and is encountered in cold weather, commencing in October, becoming aggravated as colder weather sets in, lasting usually all the winter to subside with the return of warm weather in the spring, varying in intensity with the coldness of the winter and the susceptibility of the patient. It is obstinate in form and tends to recurrence. Like the other forms of pruritus it is ushered in by itching, smarting and tingling sensations, with a hyperesthetic condition of the skin, culminating in an irresistible desire to scratch; like the others it is decidedly worse just after eating the late meal and on retiring, causing at times considerable annoyance and distress. To me the patients suffering from this trouble have been hard to manage, hard to give more than temporary relief. The secondary lesions have usually been slight, amounting to no more than a slight hyperemia and irritation. At other times, however, it is so severe as to disturb sleep and the skin becomes roughened, sore and reddish, excoriated and covered with crusts. Though not localized its favorite seat is upon the calves of the legs, around the ankles, the popliteal spaces and the inner surfaces of the thighs. It does not interfere except when severe with the general health and does not seem to be dependent upon any systemic derangement or any condition of life, except that probably those of the so-called neurotic type are the greatest sufferers. Recurring attacks undoubtedly encourage the condition of eczema of the legs.

Pruritus Aestivalis of **Hutchinson** is not generally recognized in America.

Thus the significant relation of pruritus to other symptoms of cutáneous diseases and as a concomitant of other diseases in general, the difficulty and yet the necessity of tracing it to its true source, the annoyance, the distress, the pain that it causes and the direful consequences that ensue make us appreciative of its importance, and we should not fail to do all in our power to relieve the distressing symptom.

TRANSACTIONS.

DETROIT ACADEMY OF MEDICINE.

STATED MEETING, APRIL 23, 1895.

The President, ARTHUR H. BIGG, M. D., in the Chair.
Reported by W. B. SPRAGUE, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Biddle read a paper entitled "Pruritus Cutaneus." (See page 399).

Doctor Connor: **Doctor Biddle's** paper is a very philosophical presentation of the subject. I have long been impressed with the intimate relation of the skin to the body as a whole, and to the various glands of the body. I have frequently noticed itching of the nose as an indication of torpid liver. I suspect that close attention to the minor forms of pruritus would throw light on various disorders of other parts of the body. Probably many cases have their origin in the malnutrition of gout. I sometimes find many minute stones imbedded in the conjunctiva in the gouty diathesis. I have never seen any clear account of the pathology of what is called "winter itch." It is probably allied to "hay fever" in its origin and nature.

Doctor Hitchcock: I feel that we are indebted to **Doctor Biddle** for bringing this subject to our attention in this unusual and scholarly way. The sensation of itching is helpful in the diagnosis of some obscure nervous cases. I have in mind a case in which the principal symptoms were a general sluggishness of the system accompanied by a pruritus that made life miserable and for which no relief was found. The case ended in death from an organic nerve affection. One of the most common and troublesome of cases in general practice is pruritus ani. These patients generally run the gamut of remedies, and may accidentally hit upon some simple thing that will give relief.

Doctor Sprague: I suppose ticklishness belongs to the same category as itching. I had a peculiar case in which the cause seemed to be ovarian degeneration. The patient could not bear a bimanual examination without flinching from the external hand because it tickled her so. Thus she had passed through the hands of several physicians without their discovering an ovarian cyst which had attained the size of a child's head at the time I discovered it, some two weeks after she came under my care. After the removal of the cyst the tickling entirely disappeared, and only reappeared when the other ovary began to degenerate. Treatment and pregnancy checked this degeneration some two years since, and the abnormal sensibility disappeared and has not recurred to this time.

Doctor Bigg: There are certain negative conditions that we are apt to ignore or pass by because we tacitly admit that we know very little about them, and this is one of them. It is interesting and profitable to hear such scholarly disquisitions on such a subject from time to time, as we are awakened to the fact that there is much to be learned by close study of such phenomena. I have thought that pruritus was a derangement of the circulation. It is prominent in the process of repair. I recall most intense discomfort during the healing of a glandular abscess on my thigh, the pruritus being more distressing than the pain of the abscess had been. I concluded it was due to the repair of the anastomosis. The doctor has not yet presented us with the subject of treatment, so I will not anticipate him further than to say that cod-liver oil has done more than almost any other agent, in my hands, to promote a cure.

Doctor Biddle: My mind was directed into this line of investigation by finding my powers of diagnosis taxed in relation to this symptom in the daily clinic, more than in any other way. Itching may be physiological to a certain extent—beyond this point it is pathological. The only man who has written upon the subject before is **Bronson**, of New York. The nerves which take cognizance of the sensation are supposed to reside in the epidermal structures, and that is why our **Doctor Bigg** finds it so prominent during cutaneous repairs. In this connection I will relate an interesting case. A young lady of nineteen years was referred to me by **Doctor Manton**. She had broken out with a papular eruption very like measles. The father and brother had died of BRIGHT'S disease, so I at once proceeded to examine the urine. There was no albumen and no sugar, but the specific gravity was 1039, and there was an excess of urates. Her habits had been sedentary, and I diagnosed excessive labor thrown upon the skin to eliminate the urea which the kidneys had failed to eliminate. She recovered under lithia water, et cetera.

STATED MEETING, MAY 28, 1895.

THE PRESIDENT, ARTHUR H. BIGG, M. D., IN THE CHAIR.
REPORTED BY W. B. SPRAGUE, M. D., SECRETARY.

DISCUSSION OF PAPERS.

DOCTOR HICKEY read a paper entitled "A Few Notes on the Therapeutics of the Nasal Passages." (See page 396.)

DOCTOR MAIRE: I am very well pleased with the paper that has been presented. It thoroughly covers the ground of the general and local therapeutics and the surgical treatment. I am glad the doctor has laid so much stress upon the importance of looking into the constitutional conditions. If I find a perforation of the nasal septum, I at once diagnose tertiary syphilis and administer iodides. One case that had been in the hands of several physicians before coming to me improved rapidly under this treatment. The discharge ceased in two months. I believe that a large proportion of our cases are more or less syphilitic and will be benefited by iodides. I had hoped the doctor would bring a new treatment for atrophic rhinitis to our attention. I consider medicated washes superior to the cotton probe or other means for removing the crusts that form. I indorse his advocacy of the galvano-cautery, but think that nitric acid is efficient in many mild cases. The snare is sometimes better, especially if there be polypi. But after all, constitutional treatment is the great desideratum.

DOCTOR CHITTICK: I have been much interested in the paper, and glad to have so wide a field in therapeutics opened up. I think that one who depends upon the local application of the various spray solutions loses confidence in them. I find myself constantly changing to something new.

DOCTOR HITCHCOCK: The paper is a strong argument that the specialist should be first a general practitioner, which I firmly believe. Without a thorough training in general practice the specialist does not consider constitutional conditions as thoroughly as he should. I want to contend that perforation of the septum does not always mean syphilis. Great wrong is sometimes done our patients by charging that it does. I have seen numerous cases where I have been morally sure that no syphilis existed. Among these cases I count my brother who caused a perforation by picking the crusts from his nose during an attack and recovery from pneumonia. We discussed the matter fully at Harper Hospital clinic two years ago, and DOCTOR ANDERSON also reported that he had seen several such cases.

DOCTOR CONNOR: It is sometimes said that catarrhal affections are particularly prevalent and persistent in our climate, but I have yet to find a climate where they are not prevalent. Catarrh was so prevalent in Baltimore a few years since that it was denominated Catarrhus Baltimoreiensis. The surface drainage and imperfect sanitation were undoubtedly the etiological factors. I believe that polluted air is a fertile source of nasal affections. The relation of the nasal mucous membrane to that of the stomach is exceedingly intimate, and indigestion is thus another very important causative influence. Poor teeth may be productive of both the above conditions. I have sent many catarrhal patients to the dentist before commencing treatment. Another important cause is chilling of the surface of the body. Hence careful attention to the skin is very necessary. If the air that goes into the nose is clean, and the mouth and stomach gases are pure, and the skin in a healthy condition, we have three very important factors for cure. Too much emphasis cannot be placed on food and drink, and pleasant and desirable occupation go far to aid the doctor. Reparative efforts are often defeated by lack of coöperation on the part of the patient. Ringing changes on local applications is little more than mere play, but by those careful attentions to general conditions much may be done for our patients. I know that middle-ear disease can be stayed for years, thereby.

Doctor Wyman: We should bear in mind that the influence of the fifth pair of nerves on these affections is very considerable and that they can be greatly impressed by drugs. I have some cases that are much benefited by quinine, others by arsenic. Citrine ointment applied well up in the nostrils once or twice daily will clean out the passages as well as peroxide of hydrogen though not so quickly, and the effect will be more permanent. A point raised in the paper excited my interest. The doctor speaks of severe inflammation of the antrum as the result of packing the nares with styptic cotton. Now, in some cases styptics are necessary, as in epistaxis, and hence should not be condemned but used more carefully. I am not aware that such treatment is employed for any other condition. I have sometimes wondered if constant douching and spraying does not cause abscess in the antrum—blowing in germs of all sorts with such force.

Doctor Cleland: I would like to confirm Doctor Hitchcock's observations concerning perforation of the septum. My last case was a lady, married, and with a healthy child, who has had a perforation since infancy. I believe there are many non-syphilitic cases. I have found much satisfaction from the employment of some preparation of belladonna, combined, perhaps, with quinine and camphor, in acute coryza. It will relieve in a few hours.

Doctor Sprague: I wish merely to refer to a new treatment for atrophic and hypertrophic rhinitis and thus gratify Doctor Maire's desire. For some five years Gautier, a distinguished French physician, has been demonstrating the therapeutic action of certain metals as deposited in the tissues by the electrolytic action of the constant current of electricity. It is demonstrated that the metal from the positive electrode is carried by virtue of the cataphoretic action of the current, and deposited in the tissues even at a considerable distance from the point of contact. At the Chicago meeting of the American Electro-Therapeutic Association, Doctor Morton, of New York, advocated the use of copper electrodes in rhinitis, thus depositing the newly-formed oxychloride of copper in the diseased membrane. He says: "Usually in three to five weeks, and after six or seven applications, they [patients] feel cured. . . . In atrophic rhinitis, the effect of the treatment is—(1) a gradual increase of secretion; (2) disappearance of the scabs; and (3) a greater feeling of comfort in the nose. From a theoretical stand-point it would seem probable that the activity of a number of the glands not yet destroyed is restored by the treatment. Foul sinuses may be very conveniently treated as the antiseptic is manufactured as one proceeds."—"Transactions of the American Electro-Therapeutic Association, 1893." The positive electrode (pure copper) is used in the cavity with a current of from five to twenty-five milliampères. My experience in treating uterine catarrh by the same process confirms my belief that better results will accrue from this than from any other topical treatment. I have not yet applied the method to rhinitis, but am getting good results in chronic follicular tonsilitis.

Doctor Russel: I have had good results from the very simple procedure of plugging the nares with cotton saturated with olive oil.

Doctor A. H. Bigg: I want to speak of only one point. In my personal experience I have found marked benefit from careful attention to the temperature of the feet. I owe the suggestion to Doctor Cleland. While suffering from a severe coryza some years ago, he suggested that I should wear arctic overshoes in the winter season. I since have done so from October to April of each year, and have been greatly benefited. It is a great mistake for one who suffers from these troubles to step on cold floors with the feet bare, in winter. The feet should be always kept warm. American people are proud of their handsome feet, and suffer accordingly.

Doctor Hickey: I have been discouraged in the treatment of atrophic rhinitis. I have used the constant current of electricity, but not to produce the electrolytic effect as suggested. I shall do so, however. It has been my experience that all cases of perforated septum improve under the exhibition of potassium iodide. One of the cases of packing with styptic cotton to which I referred, was packed on both sides and I found both antrums and one of the frontal sinuses inflamed.

EDITORIAL ARTICLES.

A LIVE MEDICAL SOCIETY.

Physicians who attended the recent assembly of the Mississippi Valley Medical Association were afforded an admirable opportunity for observing, in the large attendance and vast number of papers, the reward which invariably accompanies the display of enterprise so peculiarly characteristic of this interior medical organization. Indeed the officials are to be congratulated upon the excellent result which crowned their efforts to make the meeting a grand success, and especial praise is due Doctor H. O. Walker for the efficient manner in which he managed the affairs devolving upon him as chairman of the committee of arrangements. It has been said by a contemporary that the meeting was altogether too successful; but as nothing succeeds like success, no alarm will be excited by this criticism. The number of papers was so large that it was found necessary, in order to expedite their reading, to form two sections, and enforce a time limit of twenty minutes. In point of excellence the papers would compare favorably with those usually presented at such gatherings, and many of them were of a superior order manifesting special thought and careful research; but it was a matter of regret that lack of time prevented a thorough discussion of all the topics.

The address on "Surgery," delivered by **Doctor Theodore A. McGraw**, was an elaborate investigation of "Our Present Knowledge of Cancers and Tumors," during the consideration of which the following opinions were expressed:

"When one considers the absolute necessity imposed upon a complicated organism, made up of a multitude of semi-independent cells, of holding these, so to speak, in discipline, and obliging them to conform in all their activities to organic law, it becomes apparent that the power of control is that which is most essential to its healthy existence. The loss of that power over any of its parts means something more than a merely local defect or local disease. The commonest fatty tumor has, therefore, in its very existence something portentous. It does not mean merely that a few fat cells have been stimulated to needlessly multiply, but it signifies also that in that organism there is some defect in the mechanism of control. It may mean too that there exists a liability to the development, sooner or later, of more formidable growths. . . For these reasons, I cannot but dissent from the prevailing doctrines which ignore all other causes in the production of tumors than those of local significance. There is a tendency in modern pathology to exaggerate the significance of local conditions and operations, and, in the study of cancer, this may be remarked in the undue importance attributed in its causation to local irritations. If we examine, for example, the list for alleged causes of cancer of the lower lip, and for the immunity of the upper, we shall find that they will not bear criticism. **Tillmann** lays great stress on the use of tobacco and brandy, but **Bardelsen** tells us that the inhabitants of the coast of Pomerania who do not smoke, but who chew tobacco, have frequently cancers of the lip but few of the mouth or fauces. Surely if tobacco causes the disease the reverse ought to be true. All the world uses tobacco and brandy and no persons more so than certain inhabitants of the tropics, and yet cancer is said to be rare in the tropics. **Thiersch** ascribes its prevalence among the peasants to the injuries inflicted on the lower lip by the weekly use of a dull razor, but it is frequent, as I can testify, among a class of American farmers who never shave, and some of whom use neither brandy nor tobacco. . . We have not yet collected the data on which we can found a rational judgment as to the origin of cancer. We do not know, for instance, the relative frequency of the disease among the people who do not use tobacco, or who do and do not shave. That local irritation may excite the growth of neoplasms in some subjects and in some tissues is beyond all question, but this irritation can be but one factor in what is a complicated chain of morbid activities. Whether we can consider the beginning of trouble, with **Schroeder Vanderkalk**, to lie in a morbid change in some nervous center, or whether we rest content in our present ignorance, to ascribe it to some vague constitutional defect, we must, nevertheless, recognize behind the neoplasm, an impairment of that controlling mechanism, without which no complicated organism can exist. It does not militate against its existence that we are unable to define and locate it. Now if we apply this principle to those tumors which result from anomalies in embryonic development, we shall interpret the phenomena far otherwise than was done by **Cohenheim**."

In selecting the theme, "Daniel Drake; or, Then and Now," for the discourse on "Medicine," **Doctor William Pepper** manifested his keen appreciation of the fitness of oration to occasion. An interesting history of the achievements of this pioneer physician of the Mississippi Valley was recounted, the following being the introduction thereto:

"**Doctor Daniel Drake**, to whose life work I beg to invite your attention this evening, was born in New Jersey, of humble parentage, on October 20, 1785; and in the latter part of the spring of 1788 his parents removed to Kentucky. Taking **Daniel** and his baby sister, **Elizabeth**, and an unmarried sister of **Mrs. Drake**, with all their worldly goods, in one Jersey wagon, the journey was made over the Alleghenies to Fort Pitt; and then in a boat crowded with other families, and accompanied by similar boats for fear of Indians, to Maysville. More than sixty years afterward, DOCTOR DRAKE gave (in a series of reminiscent letters addressed to his children) an account of the toils and hardships and dangers endured by that pioneer family for the ensuing twelve years, until as a lad of fifteen years of age, he was sent to study medicine under DOCTOR GOFORTH at Cincinnati. I can point to no work in which a more vivid and life-like picture is given of a primitive condition of society, and in which, at the same time, the author reveals with such frankness and fullness his own character and individuality. It is not surprising that all who knew DOCTOR DRAKE, at every stage of his life, should have concurred in unanimous testimony to the lofty and at the same time attractive qualities of his nature. It is a long time since I first began to study his works, and I think I may safely say I have read all that he ever wrote for publication, and nearly all of the many publications concerning him which appeared after his death. Whence it is that some gifted persons acquire their rare charm of literary style, it were idle to inquire. To DRAKE, it was the gift of nature, the power of expressing in pure and flowing and brilliant language the lofty ideals, the clear thoughts, the graceful fancies of his ardent nature and his powerful mind. His childhood was spent in the ceaseless labor of the farm; but through it all, nature spoke to him as to a favorite son and opened his eyes to her infinite charms and inspired him with a love for herself which never lost its ardor. It was this which sustained him through a long life, into which were crowded far more than an usual number of severe trials and disappointments, and kept his spirit to the end as fresh and buoyant and enthusiastic as a boy's. There came readily with this true love of nature those precious things of life—the power to appreciate purity and nobility in humanity; the power to form and to sustain lofty ideals; and the power to scorn petty groveling ways and to pursue the chosen higher path. This was eminently true of DRAKE. His character is known to us with a rare fullness, and yet there does not appear in it a single vice. He was ambitious; but his aims were never selfish or personal. His proper self-respect was untainted with vanity. His desire for office was to secure larger opportunities for public service. Money had no attraction for him, save to promote scientific investigation and to discharge his obligations. He was familiar with the pinching grip of poverty; he longed for the larger opportunities of study and action which wealth would give; at one time he entered almost recklessly into commercial operations which involved him in financial disaster; he accepted the load of debt with cheerful courage, and eventually paid every creditor in full. And yet he never allowed himself to pursue his profession as a mere money-making calling, but resolutely devoted a large part of his talents, time and strength to the advancement of education and science."

The social features of the occasion, consisting of a reception at the Russell and a boat ride on the river, were largely attended and will long be remembered with pleasure. The whole affair was a superb success, scientifically and socially, and the profession of Detroit will be glad to again welcome this society to their midst in the near future.

EDITORIAL BREVITIES.

A SETBACK TO MEDICAL ADVANCE.

OWING to defective phrasing in the rule of the American Medical College Association which was designed to establish a four years' course in medicine, the extension requirement is not being generally adopted. The authorities of a number of the colleges have decided to continue under the three years' régime during 1895–1896, and this fact is announced in their catalogues. This is certainly an injustice to the colleges that have already advertised their adoption of the additional year, and it has been aptly suggested that the Judicial Council of the College Association might possibly possess sufficient power to revoke the rule and thereby release all colleges from its intent for the ensuing scholastic year. Under the circumstances this action would seem to be justified, pending a change in the ambiguous edict.

THE ENDORSEMENT OF ANTITOXIN.

AT the recent meeting of the British Medical Association the antitoxin treatment of diphtheria emerged from an animated discussion the most potent therapeutic agent available for this disease, notwithstanding the adverse criticism which the remedy aroused. DOCTOR GOODALL reported an experience with 241 cases, 105 of which had been treated with antitoxin, and 136 without it. Of those who were subjected to the new medicament, 24 died—a percentage of 22; of those treated by other means, 45 died—a percentage of 33. It was not noted that albuminuria or paralysis occurred less frequently in patients treated with the serum. DOCTOR ALEXANDER JOHNSON, of Glasgow, reported 105 cases in which the mortality was 15.2 per cent. under antitoxin, and 17.2 per cent. in patients treated by the remedies heretofore in vogue. DOCTOR VON RANKE reported 163 cases of uncomplicated diphtheria treated in the Children's Hospital at Munich, with a mortality of 17.7 per cent. Under other methods of treatment in previous years the death rate had averaged from 46 to 57 per cent. In the experience of MR. LENNOX BROWNE antitoxin induced nephritis, and could not be compared favorably with the classic treatment. PROFESSOR BAGINSKI, of Berlin, recounted his experience with 525 cases treated in the Emperor Frederick's Hospital. In former years the mortality averaged from 41 to 58 per cent., but the adoption of the new remedy reduced the mortality to 15.6 per cent. His record indicated that the serum treatment diminished heart failure and did not increase nephritis. DOCTOR BIGGS, of New York, Director of the Health Department, reported 500 severe cases treated with the serum, the success attained being indicated by a mortality slightly exceeding 16 per cent.

THE GOLDEN RULE.

EVERY physician should read the excellent address delivered by DOCTOR JOHN L. IRWIN before the Nu Sigma Nu Fraternity recently assembled in biennial convention at Minneapolis. It is replete with noble sentiments, and reflects great credit upon the president of this lineal progeny of the ancient order of Aesculapidæ. In it the statement is made that the ritual of this medical organization is founded upon the principles of the Golden Rule, and that "to be true physicians and fraters we must practice brotherly love, ambition, temperance, honesty, purity, justice, and charity." DOCTOR L. H. MONTGOMERY, of Chicago, has published a very flattering tribute to the address, and advocates the principles of the fraternity in the following complimentary terms: "For one, I have personally been much interested and delighted at reading his able address; and while I have not the pleasure of knowing DOCTOR IRWIN, nor the honor of being a member of the Nu Sigma Nu, yet knowing something of this fraternity and the character of its members, I am free to state that I am a staunch advocate of its cardinal principles and teachings." In answer to the question, What is the Nu Sigma Nu? the orator says: "As man first became civilized on the banks of the Nile, we naturally look there for the first evidences of the existence of a knowledge of medicine. We find that the traditions of the ancients, outside of Egypt, refer the origin of their connection with medicine to that country. Some hold, however, that the Assyrians and even the Phenicians, at an equally early date, had made medical progress. Ancient traditions tell us that CHIRON brought medical knowledge from Egypt to Greece, and became the first Greek physician. His pupil was AESCULAPIUS, about whose history there is some doubt and uncertainty, but he is believed to have lived about 1500 B. C., and whose eminence as a physician caused him upon his death to be deified, and he became the Greek god of medicine, under whose auspices all further researches were made. The sons of AESCULAPIUS became physicians, and two of them were surgeons in the army of Greece. History tells us that during the Trojan war, a son of AESCULAPIUS, having received a serious wound, was being carried from the battle-field to the ships by Nestor, who is recorded as having exclaimed:

> 'A wise physician, skilled our wounds to heal,
> Is more than armies in the public weal!'

The descendants of AESCULAPIUS, continuing the practice of medicine, gave rise to an order of priests devoted to the service of the god of medicine, who were called Aesculapidæ. ARISTOTLE, the greatest philosopher of all antiquity, was a member; and Hippocrates was eighteenth in the line of descent. Thus arose the ancient order of the Aesculapidæ, which came to view in the new world as the Nu Sigma Nu Fraternity."

MEDICAL NEWS.

MEDICAL SOCIETY OFFICERS.

THE recent meeting of the Mississippi Valley Medical Association marked the twenty-first birthday of the organization, and the large attendance on this occasion indicated that the independent majority had been attained in the enjoyment of a vigorous constitution. The program contained the titles of over one hundred papers, all of which were read and discussed. The social features were admirably planned and faultlessly perfected. The following were elected officers for the ensuing year: President, Doctor H. O. Walker, of Detroit; first vice-president, Doctor B. Merrill Ricketts, of Cincinnati; second vice-president, Doctor F. C. Woodburn, of Indianapolis; secretary, Doctor H. W. Loeb, of Saint Louis; treasurer, Doctor H. M. Moyer, of Chicago. The next meeting will be held at Saint Paul, beginning on the third Tuesday in October, 1896. Doctor C. A. Wheaton of that city was appointed chairman of the committee of arrangements.

THE NEW HOMEOPATHIC FACULTY OF THE UNIVERSITY.

THE Homeopathic Committee of the Board of Regents have selected the following faculty for the rejuvenated Homeopathic College of the University of Michigan: Doctor W. B. Hinsdale, Dean, Materia Medica; Doctor R. S. Copeland, Ophthalmology, Otology and Pedology; Doctor O. R. Long, Theory and Practice of Medicine; Doctor Oscar LeSeure, Surgery and Clinical Surgery. The chair of Gynecology and Obstetrics has not yet been filled. Doctor Hinsdale emanates from Cleveland, where he occupied the chair of materia medica in the University of Medicine and Surgery. He is a brother of Professor B. A. Hinsdale, of the department of literature, science, and the arts of the University of Michigan.

Doctor Copeland hails from Bay City. He formerly occupied the position of house physician in the homeopathic hospital of the University. Doctor Long is from Ionia, and has been superintendent of the asylum for criminal insane for many years. Doctor LeSeure is a resident of Detroit, and a member of the city board of health. Pending the decision regarding the legality of the removal edict, the school will be conducted on the campus.

THE CHUTMUCK FAMILY.

THIS social coterie, presided over by Doctor I. N. Love, constitutes the hub of the Mississippi Valley Medical Association. It is the merry-go-round ever found in the whirl of joviality and jollity, and since "'tis Love that makes the whirl go round" it was eminently proper that the Chutmucks should present their chief with some token of appreciation at the recent annual meeting. A watch was selected, and on the occasion of the presentation speeches were made by Doctor Charles A. L. Reed, of Cincinnati, and Mr. William Evans, of New York. The watch bore this inscription: "To the Chief of the Chutmucks—from his Loyal Braves." In presenting it Mr. Evans said: "Those who do not know, and do not know that they do not know, these are fools; leave them. Those who do not know and know that they do not know, these are children; teach them. Those who know and do not know that they know, these are asleep; arouse them. Those who know, and know that they know, these are wise; follow them. To-night, gentlemen, we are assembled to honor one who knows, one who makes men friends and women sweethearts; one who is the daily mirror of a broad fraternal love, a man who, having crossed the ocean with unequaled gifts as a gentleman, a scholar, and a Chutmuck, saw, heard, and felt those things which go to make the plenitude of men on foreign shores, and, after writing on their maps the word 'inadequate,' has returned to those who love the common ground on which he helps them stand; and with him here

> 'We now can think, and think aright;
> We now can see with mental sight
> That love strives ever to become
> Of plenitude in man the sum.'"

MINOR INTELLIGENCE.

YELLOW fever is still prevalent in Cuba.

PUBLIC bath houses are to be established in New York.

MUCH important matter has been crowded out of this issue.

NEW ORLEANS will indulge in a new system of sewerage to cost $8,000,000.

THE distinguished otologist, Professor Moos, of Heidelberg, died recently.

THE first operation of suprapubic cystotomy was performed in France in 1561.

THE new president of the New York State Board of Health is Doctor Daniel Lewis.

THE widow of the late Professor Huxley has been granted a pension of £200 a year.

THE Tri-State Medical Society—Alabama, Georgia, and Tennessee—will convene in annual session at Chattanooga, on October 8, 9 and 10.

OHIO has 1,620 boards of health. They embrace ten thousand sanitary sentinels.

THE medical profession is represented in the new British parliament by ten members.

AN improved stethoscope is presented to the profession by Doctor Sidney Yankauer.

A NEW antiseptic pocket case has been introduced by Doctor Cyrus Edson of New York.

DURING July 554 gallons of milk and 5,940 pounds of meat were condemned in Baltimore.

THE registration of the recent meeting of the British Medical Association numbered 2,750.

A COURT in France has fined a druggist 125 francs for practicing medicine without a license.

LUCHON, France, has a school of medical hydrology. It is equipped with nine professors and a laboratory.

THE Second Pan-American Medical Congress will be held in the City of Mexico during Christmas week, 1897.

THE American Public Health Association will convene in annual meeting at Denver, Colorado, on October 1, 2, 3 and 4.

A SANATORIUM, to facilitate the study and treatment of whooping-cough, will be established in the suburbs of Paris.

THE exhibition for money of idiotic, insane, imbecile, or deformed persons has been prohibited in Philadelphia by legislative act.

THE American Climatological Association will convene in annual meeting at Lakewood, New Jersey, in May, 1896, under the presidency of Doctor James B. Walker.

THERE are 94,081 lunatics in Great Britain. So says the report of the Commissioners of Lunacy. This number is an increase over the previous year of 2,014.

DOCTOR ELLWOOD OVERSTREET was recently shot by a maniacally excited patient at Petrona, Indiana, for attempting to give a hypodermic injection of morphine.

THE Indian Territory Medical Association will hold its semi-annual meeting in Eufaula, on December 3 and 4, under the presidency of Doctor J. S. Fulton, of Atoka.

A NEW varicocele needle has been devised by Doctor J. H. Lowry, of Neola, Iowa. It is a curved needle with a diamond-shaped point, which facilitates its introduction.

HENCEFORTH all Wayne County unclaimed cadavers will be sent to the Detroit College of Medicine, the law enacted by the last legislature having recently became effective.

The British Laryngological, Rhinological, and Otological Association held a very successful meeting on July 25 and 26, under the presidency of Doctor W. McNeill Whistler.

Doctor Felix Hoppe-Seyler died of an apoplectic stroke on August 12, aged seventy years. He occupied the chair of Pathological Histology in the University of Strassburg.

The Red Cross Society of Japan was founded in 1877 with thirty-eight members. To-day the organization numbers 141,000 members, has an income of $380,000, and owns a good hospital.

The founder of the Geneva Red Cross Society, Henry Dunant, after expending all his means in promoting his idea, is now reported to be in extreme poverty. He is sixty-seven years of age.

Candidates for matrimony in the Scandinavian Peninsula must produce certificates showing that they have been baptised and vaccinated before a minister can legally perform the ceremony.

Doctor Thornley Stoker, the president of the Royal College of Surgeons in Ireland, and Doctor Christopher Nixon, the physician in ordinary to the viceregal household, have been honored by knighthood.

Mr. William Berry, who recently died in England, leaving $165,000 to the medical charities and $70,000 to the other charities of Manchester, began life by manufacturing blacking on a small scale and hawking it about.

Doctor Ritter has reported, in a communication to the Berlin Medical Society, that in the examination of the teeth of 637 persons, more than half of whom were under fifteen years of age, he found only four whose teeth were sound.

MEDICAL PROGRESS.

MEDICINE.

LAVAGE.

Some ten or twelve years ago, an article upon the method of cleansing the stomach by means of a soft rubber tube, used first to introduce alkalinized warm water, and then to remove the same by siphonage, was listened to with eagerness at the meetings of medical societies as describing a procedure novel in America. Since then, however, a literature vast and prolific has sprung up, which treats not only of lavage, but of various methods, exoteric and esoteric, for learning the state of the gastric secretions, the motility of the stomach, and the size, shape and position of the organ, as well as for treatment by means requiring the introduction of instruments through the mouth and esophagus. As in all novel or comparatively novel matters in medicine, the tendency is to run to extremes, and the new methods of diagnosis and treatment of gastric diseases have in some hands been pushed far beyond their legitimate field of usefulness. It is noteworthy in this respect, that some of the most enthusiastic writers and practicers of the new methods are those who have most recently learned about them. Those to whom they are no longer new have in most cases considerably restricted their resort to these methods. In the present article we design to speak only of the procedure known as *lavage*, or washing-out of the stomach, effected as stated, by pouring the cleansing solution into the stomach, through a soft rubber tube, and removing it by the same means, through the process of siphonage. It requires little apparatus, and the necessary skill is readily acquired. To insert the tube, all that is necessary is to have the patient seated in an upright posture, to moisten the tube with warm water, or, on the first occasion, to dip the end of the tube into glycerin, and then with firm but gentle motion pushing the tube into the pharynx, tell the patient to swallow, at the same time pushing the tube steadily forward. It is unnecessary to introduce the finger of the disengaged hand to guide the tube into the esophagus, though this may be done by an inexperienced operator, who finds the simpler method too difficult. The great secret is this: When any obstruction is felt, one should cease for the moment to push the tube onward, and the obstruction, which is, of course, merely spasmodic contraction of the pharynx or esophagus, will relax and the procedure can be continued without difficulty. To attempt to push the tube onward against the spasmodic obstruction causes the patient to gag, and may induce violent retching, so that the operation is frustrated. The greatest difficulty under which to attempt the introduction of the tube, is when a bed-ridden patient, who, for any reason, is unable to sit erect, is the subject. It is then better to turn the patient slightly upon the side, so that if there should be vomiting the fluids may readily run out of the mouth. The tube should never be retained in position while the patient is vomiting, as it may cause the entrance of the vomited material into the larynx. However, very little experience is needed to teach one the manipulation, and great skill is soon acquired.

In many cases the patient learns to pass the tube after it has been passed a few times by the physician. The solutions most useful are sodium bicarbonate, sodium sulphate, sodium borate and sodium phosphate, in the strength of a drachm to a pint of water. The most common indication for the employment of lavage is chronic gastric catarrh, and there is no doubt that in many cases the removal of mucus, retained, undigested matter, bacteria and the products of fermentation is of great assistance in the treatment of this affection. Not only that, but the gastric mucous membrane is stimulated to repair, and digestion and absorption more readily take place in the clean condition of the organ. When lavage is employed in a case of gastric catarrh, sufficient of the cleansing solution should be introduced and withdrawn to effect a thorough cleansing. This is made manifest by the fact that the returned water appears clean, ceasing to contain the abnormal materials spoken of. The best time for the performance of lavage is before the morning meal, but circumstances may require it to be done at other times. It should then take place sufficiently long after a very light meal, to insure comparative freedom from the presence in the stomach of particles of solids, which might block up the eye of the tube. In an ordinary case, lavage should be done every day, or every other day, for about two weeks; after which, the intervals between successive washings may be greatly lengthened, and finally the process entirely omitted. In a few cases, one or two washings will suffice, the stomach being once made clean, remaining in good condition. Judgment must be used in selecting the cases for the performance of lavage. It is not necessary in all forms of gastric disorder, nor in every case of the particular forms in which it is more useful. Speaking now merely of simple gastric catarrh, we should say that lavage will not do harm in any case, but that it is only necessary in those cases in which there is indication of fermentation of materials retained through delay of digestion; or in which excess of acid in the stomach is indicated by subjective distress. It is therefore in cases of long standing, in cases of alcoholism, in cases of acid dyspepsia, in cases of dilatation, and in cases of lithemic origin that the process is found most useful. In dilatation, dependent upon obstruction at the pylorus, it finds its greatest usefulness, is indeed indispensable. In gastric ulcer, employed at the beginning of treatment, it removes from the stomach materials that excite to vomiting, and is often of the greatest utility. In vomiting from other than gastric diseases, as in cases of hepatic colic, of uremia, of pulmonary tuberculosis, of hysteria, lavage by relieving the stomach of its contents often causes the cessation of the annoying symptom. In obstruction of the bowel, it is of great service as a palliative, and sometimes seems to assist in the relaxation of the obstruction, when this is not due to structural alterations. It should always be employed as a preliminary to surgical operation in cases of intestinal obstruction (in which category strangulated hernia is to be included), for in its absence the vomiting sometimes induced by ether may turn the balance against recovery.—*The Philadelphia Polyclinic.*

ON CYCLING AS A CAUSE OF HEART DISEASE.

The chief danger of cycling lies in the fact that a cyclist takes much more exercise than he is aware of or than he intends to, and is frequently tempted to overtax his powers. This overtaxing of strength may accompany efforts to reach a given point as laid down in plans for the day, or as is made necessary by certain exigencies. More frequently, however, the extra exertion is put forth in hill-climbing. In this latter case the heart has already as much strain put upon it as it can stand with impunity; but a glance shows the rider that but a few more turns of the wheel will bring him to the top, and he redoubles his exertions, and the mischief is done. In club runs, again, while the start is made to correspond with the pace of the slowest riders, the faster riders unconsciously quicken their pace, and the slower ones must follow at a rate entirely beyond their capacity or be left behind. Excessive cycling, by the strain thrown upon the heart, may produce one of four conditions: first, simple hypertrophy. This is a compensatory effort on the part of nature to enable the work to be performed, and may terminate in recovery, in valvular disease and disease of the aorta, or in degeneration of the heart muscle. The latter condition is the common fate of an hypertrophied muscle. Second, acute dilatation of the heart. This condition begins as soon as the cyclist shows signs of being "short of breath." Until this time the blood pumped into the lungs and that pumped out into the tissues is equal in amount; but as soon as this symptom appears there is an inequality in the delivery from the two ventricles, and, if exertion is then continued, permanent damage will result. This condition may terminate in recovery, in the production of valvular disease, or in sudden death. Third, chronic valvular disease of the heart. This trouble may arise as a sequel to acute dilatation of the heart on account of the stretching of the auriculo-ventricular ring. It may arise as a result of hypertrophy from stretching of the aortic ring, from the giving way of a valve, or from the occurrence of sclerotic changes in the valves. Fourth, functional derangement of the heart. This condition is very frequent as a result of cycling, and is comparable to the cases of irritable heart described by Da Costa as occurring among the soldiers during the civil war. It would seem as though the strain thrown upon the heart had caused a suspension of the inhibitory function of the pneumogastric nerve. The symptoms commonly noted were palpitation, dyspnea, a sensation of sinking at the epigastrium, subjective sensations in the region of the heart, intermittency of the heart's action, and anginoid symptoms. While the above enumerated dangers are constantly present to the cyclist, yet in moderation and under proper conditions, it is one of the most health-giving forms of exercise, and is a potent remedial measure in established heart disease. As preventive measures against the dangers of this fascinating sport may be mentioned: first, the use of a low gear; second, the upright position in riding; third, adequate food when riding and the avoidance of muscle poisons, such as beef tea; fourth, the avoidance of preparations of kola and coca, which numb the sense of weariness; and fifth, on no account should the cyclist continue riding after he has commenced to feel short of breath, or when there is the slightest sense of weariness in the chest.—*The Lancet.*—*The International Magazine.*

SURGERY.

THE SURGICAL TREATMENT OF MEDICAL INTRACRANIAL LESIONS.

Angel Money (*The Intercolonial Quarterly Journal of Medicine and Surgery*, May, 1895), in a paper on the "Surgical Treatment of Medical Cases of Profound Loss of Consciousness," suggests that the time has come when radical measures may be tried for cases of this kind, which are simply permitted to die. Intracranial hemorrhage is regarded as a very natural accident in Bright's disease, atheroma, and hemorrhagic pachymeningitis. When the hemorrhage occurs in other situations than the head, death need not follow for some months and even years, and if only a few extra weeks of conscious life can be attained by any means, such means, it is held, ought to be adopted. In the author's opinion direct operation on the brain is preferable to ligature of the carotid artery. The diagnosis can thus be verified, and there is less risk of a fatal issue as the direct result of surgical interference. Ingravescent apoplexy due to cerebral hemorrhage may have its essential features simulated by embolism and thrombosis of cerebral vessels. In cases of hematoma of the dura mater an exploratory incision through the dura mater might afford temporary relief to the urgent head symptoms, and clear up the nature of the case. A case is recorded of cerebral hemorrhage into the right hemisphere as an illustration of the class of lesions in which, the author thinks, it would be the right thing to try the effect of craniotomy. In considering what would have happened had the hemorrhagic area been exposed and drained, he holds that the patient's condition and chances could have been rendered no worse by any kind of operative interference carried out with the usual precautions of modern surgery.—*The British Medical Journal.*

A LETTER TO AN ASPIRING "ABDOMINAL" SURGEON.

DEAR DOCTOR: After you left, in thinking over the case, I questioned myself if I did right in encouraging you to operate, for although such cases are sometimes easy, as a rule they are complicated and difficult, and for any one to attempt such an operation who has never seen or assisted at any, is a very serious matter. To do abdominal surgery, you must prepare yourself, you must have assisted at a great many operations, to see the difficulties you will encounter and find out how to meet them. To operate on a case is a very serious matter if you are not prepared and have not the facilities to meet emergencies. The great abdominal surgeons in this country—those who have done hundreds of cases, still go around from one city to the other to see other operators and get pointers from them. They are never satisfied with their ability; they are always on the lookout to pick up new points in the technique.

Abdominal surgeons are products of evolution; they have all been general practitioners for many years; they have especially paid attention to diagnosis. Some of them, as the result of environments, became expert obstetricians and consequently also gynecologists. Their general practice they gradually gave up; and as gynecology grew, they had finally also to give up the practice of obstetrics, and so became exclusively, gynecologists.

The gynecology of the past consisted in smearing a little iodin on the cervix and inserting a pessary for retroversion; with an occasional operation for vesicovaginal fistula or lacerated perineum. But gynecology grew, and it was found that the tubes or ovaries were the cause of the trouble in many cases. They were removed, and the gynecologist became a pelvic surgeon.

Pelvic surgery frequently requires the repair of injured intestines and of the bladder; sometimes a mistake was made in the diagnosis and what was supposed to be a pus tube, was found to be a diseased appendix, or the enlarged spleen was mistaken for a fibroid tumor, and the pelvic surgeons found themselves obliged to operate on all the abdominal organs and thus they became abdominal surgeons.

Another class of general physicians seem to have a peculiar gift in treating fractures and dislocations, and in operating, and thus became general surgeons; as general surgeons they also had to remove tumors of various kinds; they had to open the abdominal cavity, treat diseases of the liver and kidney, and operate for hernia and so became familiar with abdominal surgery. They gradually gave up general practice, some of them even gave up general surgery and became abdominal surgeons, pure and simple. Thus, my dear doctor, you see that the so-called abdominal surgeons have gradually been evolved from the general practitioner. They have tried to master all the branches of medical science; they have developed medical skill in every direction; they have studied pathology and etiology; they have kept abreast with the wonderful progress made in bacteriology, and with our improved knowledge of the diseases of the nervous system and of reflex neurosis.

In short, they have tried to master a fair knowledge of the general practice of medicine, and they tried to become expert in the technique of operations, so that they could diagnose a case which required operation promptly, and make few mistakes, and if the patient required an operation they could perform it quickly and safely.

Then, for you to attempt such an operation without any training whatever, and without even knowing what the trouble really is, I would consider reckless; in fact, it would be unjust to the patient. You have no right to trifle with human life in that manner, no matter if the patient trusts you and the family will not blame you if she dies. The question before you is, are you doing the *highest ultimate good to the patient as you have sworn to do* by the Hippocratic oath? Do you think that you can operate as well as some other persons who have had more experience? I think you would not say, yes. You must admit that such a patient has 500 per cent. more chance to live if she goes to a hospital and is operated on by an experienced man, than if you operate on her without the facilities that a hospital offers. This is simply the moral aspect of the case. When it comes to the low, common, commercial view, it is a very poor investment on your side. In your letter, which I have just received, you say that your future success depends upon the result of this operation. You certainly risk a great deal on the cast of the die. You know that this case may do you a great deal of harm; your competitors will call you reckless, for there are always plenty around who will do backbiting as you well know, so that you run a very great risk, as you say, of injuring your reputation. Now, what do you gain? Why, absolutely nothing. The patient probably cannot pay a cent, and if you should be successful and the patient lives, who will know anything about it? Who will ever hear about it? The few people with whom the woman is acquainted do not amount to anything. Your competitors will belittle the operation if she gets well, and say it did not amount to much. You will neither pick up any new business nor get any new cases, because they are few and far between. If the woman gets well, few will know about it; if she dies, everybody will hear of her death; they will inquire about the cause and find out all about it, and that certainly will not help your reputation; really the game is not worth the powder. Such isolated cases as a general practitioner gets of this kind do him absolutely no good. They waste more money in buying instruments than they get for the case.

If you want to become an abdominal surgeon, come down for a couple of weeks and I will show you all the cases I can. Go to Philadelphia and New York and see the great operators and assist them. I will be glad to help you and give you letters to these men. Then after having prepared yourself for three or four months, by seeing many cases and assisting at them, you can tackle them yourself and may become as expert as any one, but now, without preliminary training, I would advise you to keep your hands off, for you will do yourself no good and only injure your reputatien, and you trifle with human life.

How much better it is to establish a reputation of being careful and conscientious. How much better you stand in a community when you admit that you do not know everything, but that there are special, rare and complicated cases which can only be handled properly by those who devote themselves exclusively to these kind of cases. Such honest statements never hurt one in a community; they rather raise you in the estimation of the people. You establish a reputation for honesty and carefulness, which is so desirable. As I have plenty of cases and do not want your case, I thought that it would come in good grace from me to give you this lecture, especially as I would like to see you get along and would not like to see you do things which will hinder your further progress.

Hoping that this will be received in the same kind spirit with which it is offered, and to hear from you again, I remain, Yours truly, J. H. Carstens, M. D.

GYNECOLOGY.

DIAGNOSTIC PALPATION OF THE FEMALE PELVIC ORGANS.

THE general practitioner, while keenly alive to the rapid progress in all departments of gynecology, is, as I have met him here and in the consulting room, less interested in the details and variations of technique of different operators in the performance of the major operations of gynecology than in the knowledge of how to reach a diagnosis in cases as they present themselves to him. He realizes that just here lies the difficulty; that, an accurate diagnosis being made, the indications for treatment are fairly clear. Upon a correct diagnosis, also, the family physician must base his decision as to whether he himself shall attempt to relieve the condition, or whether the interests of his patient are best subserved by referring her to the specialist.

The fundamental importance of palpation in the diagnosis of diseases of the female pelvic organs goes without question. With it alone, and without the aid of *any* instrument, the expert is able to make a diagnosis in the vast majority, if not in all, of his cases; without it, he cannot reach a satisfactory conclusion in a single case. Bimanual palpation forms the *sine qua non*, the very essence of gynecological practice.

In what follows we shall limit ourselves to the question of *diagnostic* palpation as distinguished from *therapeutic* palpation. The latter, embracing massage in its various forms, the bimanual reposition of the retroverted uterus without the aid of instruments, the divulsion of intrapelvic adhesions in narcosis after Schultze, et cetera, is a subject too large and varied for consideration within the limits of a paper such as this. Skill in therapeutic palpation, however, necessarily presupposes considerable familiarity with diagnostic palpation; while skill in the latter is augmented by practice of the former. The highest capabilities of both can only be developed and maintained by daily practice. Of the two disciplines, however, that of diagnostic palpation is fundamentally the more important and essential.

Advance in diagnosis by palpation has almost, if not quite, kept pace with the progress of gynecological surgery. Indeed, it is most natural that this should be so, and that the man who has frequeut opportunity, by abdominal section, for instance, to corroborate or disprove a diagnosis previously made, to analyze sources of error, and to profit by their study, should become more and more expert in the interpretation of the findings of bimanual palpation. And it is just in proportion to the time, diligence and patience he is willing to devote to the practice of bimanual palpation before operation, and to a comparative analytical study of the real conditions presented at the operation itself, that he will derive benefit and increased knowledge from his experience. It is by no means uncommon to find a gynecologist of moderate, but thus thoroughly digested experience rather ahead in diagnostic abilities of his brother with larger clinical material imperfectly and superficially studied. The latter may claim that he has no time for the refinements of diagnosis. For him the discovery of an exudation, tumor or mass in the pelvis or abdomen is sufficient indication for abdominal section, without a careful analysis of the subjective symptoms and objective signs. Unnecessary celiotomies and other serious operations have, under these circumstances, again and again been performed.

They have either terminated as so-called exploratory celiotomies—sometimes fatal—or if, mayhap, the *furor operativus* have been so intense as to blind the operator, paralyze his judgment, and prevent him from knowing when to stop, have resulted in the removal of healthy or but insignificantly diseased organs, or in other injury or death to the patient. A few mistakes of this kind are found recorded; the vast majority are, for obvious reasons, never published.

Gynecological diagnosis, in its more restricted sense, is nearly synonymous with diagnostic palpation of the female pelvic organs, and the practice of the latter resolves itself virtually into the practice of the bimanual touch, or combined external and internal palpation.

Vaginal palpation alone, and rectal palpation alone, have absolutely no place in modern gynecological diagnosis, and consequently in furnishing indisputable indications for treatment.

To illustrate: vaginal touch suffices to establish a diagnosis of cancer of the cervix; bimanual examination, however, is necessary to determine whether the case is still an operable one. The condition of ovaries and tubes can be satisfactorily made out only by the bimanual; yet who would be willing, at the present day, to undertake the active treatment of any gynecological case without first knowing the condition of ovaries and tubes?

Abdominal palpation, though by itself of little or no value in the diagnosis of pelvic disorders, cannot be dispensed with in the modern practice of gynecology, since many conditions of the abdominal organs, notably movable kidney and appendicitis, which so often produce symptoms complicating and counterfeiting disease of the pelvic organs, can only be recognized in this way.

Granted, then, the fundamental importance, in the practice of gynecology, of bimanual palpation of the pelvic organs, I propose this evening to consider the subject from three stand-points:

(1) The manner of practicing palpation of the female pelvic organs.

(2) The information to be gained from such palpation.

(3) Incidentally, some of the therapeutic indications derived from such information.

In doing so I shall make no pretense of dealing exhaustively with the subject, but will endeavor rather to indicate the routine and practical details of an every day gynecological examination.

And furthermore, we shall confine ourselves to gynecological diagnosis as far as it can be made by the fingers alone, without the assistance of any instrument whatsoever. As already stated, a diagnosis thus arrived at will suffice in the vast majority, certainly over ninety-five per cent. of all cases. The remaining less than five per cent., in which further exploration is possibly called for, are cases for the experienced specialist.

The practice of the bimanual touch will vary somewhat in its details according as it is undertaken in a well equipped office or hospital, or at the home of the patient. The office examination, furnishing the standard of conditions under which bimanual palpation is practiced to the greatest advantage, will be first considered.

The indispensables to a satisfactory practice of the bimanual touch are a good examining chair or table and proper leg-holders. Quite an array of both are in the market to suit various fancies, tastes and purses. As for the tables, nearly every one of them will answer the purpose, the choice between them narrowing itself down to a question of appearance, of greater or less convenience, of adaptability to uses in addition to those of diagnosis, as well as of personal predilection arising from familiarity and habit. I myself use a Harvard chair in my office, and the operating table bearing my name in my hospital, examinations, without thereby meaning to imply that either of them is superior for purposes of examination to many others. A point of some importance is to have the table of the proper height to suit the examiner, so as to avoid the fatigue of stooping and strained positions.

Many of the leg-holders or heel-rests in common use are objectionable, on the score of constrained position of the patient and incomplete relaxation of her muscles. I found my own leg-holders, originally devised to facilitate the performance of gynecological operations, so useful in connection with the examination of hospital patients, that some years ago I had a pair of them fitted to my Harvard chair without, however, removing the stirrups coming with the latter. I can thus use either leg-holders or foot-rests at will, but invariably prefer the former in first and difficult examinations. They act on the principle of suspending the lower extremities by the ankles, with the legs and thighs flexed, the knees falling apart by their own weight. Thus every muscle of the lower extremities, pelvis and abdomen is relaxed and the bimanual examination greatly facilitated.

I have also (*The New York Journal of Gynecology and Obstetrics*, January, 1893) had these leg-holders made in such a manner as to be readily transportable, and provided with clamps attachable to any table. They also form part of my portable gynecological operating table. Thus all the conveniences for thorough gynecological examination, as well as operation, at the home of the patient are at our command.

Immediately preceding each examination, the patient should empty the bladder. It is desirable, though not always as convenient, nor as imperative as in the case of the bladder, to have the rectum also empty. After removing her corset and loosening every article of apparel about the waist, the patient is ready for examination.

The patient is then placed in position on the table, upon the back, with her buttocks at the edge of the table and her feet or legs sustained by a suitable leg-holder. Whether she lie with the upper part of the body somewhat elevated, or perfectly flat, makes little or no difference when the author's leg-holders are used. With other leg-holders it is preferable to have the head and thorax somewhat raised.

Unnecessary exposure of the person should be avoided, and the patient's feelings of modesty should receive all due respect possible under the circumstances.

The examiner now takes his position at the foot of the table, and introduces the index finger of one hand into the vagina, carrying it along the posterior wall so as to avoid the sensitive parts of the vestibule, until the cervix uteri and the vaginal vault are reached.

The fingers of the other hand are placed upon the lower abdomen in such a manner that all the organs of the pelvic cavity successively come to lie between, and are palpated by, the internal and the external fingers.

Obstacles to successful vagino-abdominal palpation, the bimanual examination as generally practiced, are a short vagina, unusually high position of the uterus and of its adnexa, and a well-developed panniculus adiposus. These obstacles can in nearly every case be overcome by combined recto-vagino-abdominal palpation.

Indeed, I cannot commend to you too highly this mode of examination, especially in difficult cases and in your first examination of any case. I employ it under the just-mentioned conditions all but invariably.

In practicing recto-vagino-abdominal palpation the fingers of one hand are placed on the lower abdomen in the usual way. The index finger of the other hand is pressed into the vagina, while the middle finger of the same hand enters the rectum. Or the thumb may be passed into the vagina and the index finger into the rectum, at the option of the examiner. Personally, I prefer the former arrangement.

I have very rarely found a patient to seriously object to this method of examination when properly undertaken, while at the same time the situation and the advantages of the more accurate diagnosis thus obtainable were explained to her.

Experience here as elsewhere is an important item, and the experienced, well-oiled finger can be so deftly and gently introduced into the bowel and beyond the third sphincter as to give the patient absolutely no pain. The disagreeable sensation of an impending fecal movement is the only thing complained of, and this passes away instantly the finger is withdrawn.

By means of the recto-vagino-abdominal touch, the examining fingers penetrate the pelvis to a much greater depth, the perineum being carried upward to the extent of about three centimeters upon the web between the vaginal and rectal fingers.

To satisfactorily and completely fulfill its mission as an explorer, the rectal finger must penetrate beyond the third sphincter, the situation of which corresponds in height with that of the os internum. Under ordinary circumstances the posterior surface of the uterus as well as the tubes and ovaries are thus palpated with the greatest facility. I can promise you that after you have once experienced its advantages, you will never again abandon this method of combined recto-vagino-abdominal palpation.

Elevation of the pelvis, the Trendelenburg posture, by causing the abdominal viscera to gravitate away from the pelvis, will occasionally prove a useful adjuvant in the performance of the bimanual.

The bimanual examination of *virgines intactæ* should always assume the form of a recto-abdominal palpation. There is no need in these cases of a vaginal examination; the finger in the rectum will teach us all we wish to know concerning uterus, tubes and ovaries. The only difficulty to be overcome is to identify the cervix; a little practice will enable us to master this detail.

An excessive deposit of fat over the lower abdomen and the buttocks, forms one of the most common of the ordinary difficulties to be overcome in bimanual palpation. In this connection it is well to remember that very fat women present a transverse crease or furrow, deeply indenting the panniculus adiposus, just above the pubis. By passing the finger-tips of the outer hand down to the bottom of this furrow or crease, the examination will sometimes be possible where, without this little artifice, it would fail. In any event, however, most of the fine palpatory work in fat women will have to be performed by the vaginal and rectal fingers.

Gentle, light and deft palpation will aid us in gaining the confidence and coöperation of our patient, and will often succeed where brusqueness and uncalled-for exertion of strength will fail. By pressing so hard as to cause the patient pain, we provoke the abdominal muscles to contraction, in self-defense, and thus directly defeat our purpose, besides exhausting the muscles of forearms and fingers and blunting our sense of touch.

The sense of touch, the *tactus eruditus*, is the gynecologist's stock in trade. Without it he could no more pretend to practice gynecology than a blind man could practice ophthalmology. A finely developed *tactus eruditus* is not to be looked upon as an innate gift; it is solely the result of daily, patient and painstaking cultivation.

A first examination of a patient at her house should never be made in bed unless her removal from bed be attended with risk. A firm table, strong enough to bear the patient's weight, is our first choice. In lieu of that, the head end of an ordinary sofa may be used to support the patient's buttocks, her back and head resting upon pillows, appropriately disposed upon the body of the sofa. With the patient's knees separated and drawn up toward her face and held there by her own or a friend's hand, an excellent posture for the practice of the bimanual touch is obtained.

Occasionally, though less and less frequently with increasing experience, examination in narcosis becomes necessary in order to establish a satisfactory diagnosis by bimanual palpation. It is scarcely necessary to add that when the patient submits to the unpleasantness and risk attending the administration of an anesthetic she has a right to expect that the verdict reached shall be final, and that, therefore, only a thoroughly competent examiner should officiate on the occasion.

To secure complete relaxation of the muscles of the abdominal wall, the routine examination of patients with abdominal or pelvic tumors in a full hot bath is recommended and practiced by F. Chlapowski (*Nowiny lekarskie*, 1891, Volume III). I do not see how, apart from the inconvenience and circumstance of the thing, the difficulties of proper posture of the patient, and of ready access to the pelvic organs, at the bottom of a bath tub are overcome. I have, however, occasionally availed myself of the relaxing effects of the hot bath to overcome excessive rigidity and hyperesthesia of the abdominal walls, the examination being made immediately *after* the emergence of the patient from the bath.

Before we proceed to the consideration of the pathological conditions of the female pelvic organs recognizable by bimanual palpation, it may be well to describe briefly the normal findings.

Under favorable conditions, with proper posturing of the patient, bimanual examination should furnish us a clear picture or conception of the size, position, consistence, et cetera, of the following structures and organs: anus, vulva, vagina, urethra, bladder, the lower five to six centimeters of the ureters, the rectum to beyond the third sphincter, cervix, uterus, tubes, ovaries, pelvic cellular tissue and peritoneum, walls of the pelvis, the broad, round and utero-sacral ligaments.

Palpation of the ovarian ligaments is often a difficult matter, although of the greatest importance and almost pathognomonic significance in the diagnosis of small ovarian tumors.

In making gynecological examinations it is well to accustom oneself from the very beginning to a certain system or order, both as regards the examination itself and the record thereof. The general custom is to begin with the perineum and to examine and record in ascending order the condition of the organs and structures enumerated above. I follow the general custom in so far as, on my way to the tubes and ovaries, I make a mental note of the condition of the parts successively met. The real examination, however, I begin with the tubes and ovaries in all cases in which these structures can be reached and defined. The condition of the tubes and ovaries is of such essential and prime importance in diagnosis, prognosis and the formulation of therapeutic indications that we cannot afford to forego exact knowledge thereof in any case.

The findings on examination, then, are noted and recorded, beginning with the ovaries and tubes. The fundus of the uterus, our guide to the tubes, and along these to the ovaries, is the first thing sought for by the palpating internal and external fingers. The promontory of the sacrum is the next point to be located. It forms the principal landmark in the determination of dislocations of the uterus, tubes and ovaries, as well as of their degree.

Having introduced the finger or fingers to the proper depth in vagina, or vagina and rectum, the abdominal wall is depressed by the fingers of the external hand, until the finger tips of one hand recognize, or practically meet, those of the other behind to the uterus. This presupposes, of course, a uterus not enlarged by pregnancy or the presence of a tumor, and not impacted in retroversion in the pelvis. We are now ready to proceed to the palpation of tubes and ovaries, and with this palpation, as already stated, begins the examination proper.

Palpation of the ovaries is best accomplished by following the tube from the uterine cornu outward to the ovary. This will sometimes prove impossible of accomplishment from the vagina on account of inelasticity, thickening, or senile atrophy of the vaginal walls. Examination per rectum will enable us to overcome all difficulties of this sort, and to recognize with the greatest distinctness normal sized tubes and ovaries, especially when prolapsed backward with a retroverted fundus uteri. Indeed, by artificially dislocating the fundus backward by pressure with the fingers of the outer hand, we can, in practically all cases, bring the ovaries and tubes within easy reach of the rectal finger.

Having satisfied ourselves that the ovaries are normal in size, we next test them for sensitiveness on pressure. In doing so we must avoid being deceived by the presence of a lumbo-abdominal neuralgia as denoted by a Valleix point in the anterior abdominal wall near the median line. In differentiating we will remember that in mural neuralgia the pain on pressure is very localized, and is elicited by pressure of an external finger alone; while the pain of oöphoralgia or oöphoritis is elicited by pressure of the internal finger, or better still by compression of the ovary between the inner and outer fingers. A tender appendix vermiformis may, in rare instances, prove difficult to discriminate from ovarian pain on pressure. Palpation of the appendix from without will eliminate this possible source of error.

A calculus lodged in the lower end of either ureter may be mistaken for a cirrhotic ovary. The diagnosis is cleared up by determining the presence or absence of a normal ovary on the same side with the doubtful hard body.

In all tumors of suspected ovarian origin the diagnosis can be made absolute only by determining the relations to the tumor of the ovarian ligament. When this ligament can be distinctly traced running from the uterus on to the tumor, we know the tumor must be ovarian. This is, however, by no means always an easy task, even when we resort to artificial dislocation of the uterus either upward into the abdomen or downward toward the pelvic outlet. The recognition of a normal ovary beneath or alongside of a pelvic tumor of doubtful origin will of course enable us to exclude ovarian tumor.

Palpation of the normal sized Fallopian tubes is to-day common property of all thoroughly trained physicians, and offers no difficulties under ordinary favorable conditions. The tubes are felt between the internal and external fingers as rounded cords, extending from either cornu uteri outward to the pelvic wall. The direction of the outer half of the tubes serves to distinguish these organs from the round ligaments; the relative position of the two structures also aids in their differentiation.

Perfectly normal tubes are non-sensitive on pressure, even as the healthy uterus itself. When the fingers recognize a normal-sized tube, sensitive on pressure, while an equal degree of pressure immediately above and below the tube fails to elicit pain, the diagnosis of salpingitis, probably catarrhal, must be made. Reasoning backward from the salpingitis, a causative endometritis is the logical deduction, even though all the other usual symptoms of the latter are absent. In the absence of contraindications, curettage and drainage of the uterus are the measures called for.

In cases of movable retrodeviated uteri, exact palpation of the tubes and ovaries is sometimes more easily accomplished after lifting the fundus forward bimanually. Should tubes and ovaries then be found non-adherent and normal in size, the tubes perhaps slightly sensitive on pressure, the indications for me would be curettage of the uterus and shortening of the round ligaments.

We have described the physical signs of a simple catarrhal salpingitis with but little, if any, increase in size of the tube. In the severer forms of salpingitis the ovaries, pelvic peritoneum and adjacent organs are generally more or less involved. An attempt to describe the most endless variations in the physical signs produced by these complications would lead us too far.

Whenever the tubes, in these complicated conditions, form the focus or starting point of the inflammatory process, and yet are not of themselves very greatly enlarged, it becomes a matter of practical importance to determine, if possible, whether the tubes maintain their normal direction, running straight outward from the horns of the uterus, or whether they are prolapsed backward into Douglas' sac, spiral in their course, club-shaped or very irregularly thickened. Under the first named circumstances curettage and drainage of the uterus, followed by an energetic ichthyol therapy, might still lead the case to a favorable termination, while with the last named conditions present more radical measures would be indicated.

A tubal tumor can, in most instances, be diagnosticated by bimanual palpation, more especially if we succeed in recognizing the ovary of the same side.

The diagnosis, as to the character of the tubal tumor, whether it be hemato-, hydro- or pyosalpinx, tubal pregnancy, tuberculosis, actinomycosis, cancer or other malignant tumor, cannot, however, be made with any approximation to certainty by bimanual touch alone. If a tubal tumor be suspected the examination should be conducted as gently as possible, the possibility of rupture during manipulation being constantly borne in mind.

The diagnosis of occlusion of the abdominal end of the tube may occasionally be prognostically, as well as therapeutically, of practical value. This diagnosis becomes probable when the outer end of the tube can be felt as a club-shaped enlargement, with adhesions to neighboring parts.

The various uncomplicated displacements of the uterus are readily recognized on bimnaual palpation, especially by the recto-vagino-abdominal touch. In this connection the various physiological displacements of the uterus, due to overdistention of bladder or rectum, as well as to the posture of the patient, must not be lost sight of.

Quite a different matter is the diagnosis of displacement of the uterus, when these displacements are the result of disease processes outside of the uterus itself. The uterus may be dislocated in any and every direction by tumors of adjacent viscera, by para- and perimetritic exudates, scars and adhesions.

It is often extremely difficult to recognize the uterus when buried in the conglomerate pathological masses thus produced. Our chief aids in the discovery of the uterus, under these circumstances, will be the recognition of the continuity between cervix and body, as well as of the form, size and consistence of the uterus itself. This peculiar consistence of the uterus, under varying conditions, can only be learned from considerable experience and is almost impossible to describe. A knowledge thereof is of invaluable aid in diagnosis.

The recto-vagino-abdominal touch will furnish valuable information regarding the presence or absence of adhesion in cases of retroversion of the uterus. The therapeutic indications, in a given case, will depend upon this information.

Inversion of the uterus is completely and satisfactorily diagnosticated by bimanual palpation. A depression is felt where the fundus uteri should be, and the tubes and ovaries are recognized, arising from the depths of the depression.

The diagnosis of tumors of the uterus, by bimanual palpation, is easy in those cases in which the continuity of cervix, or corpus with the tumor, or the connection of the tumor with the uterus by a pedicle, can be traced. Failing in this we must have recourse to other diagnostic aids: contour and consistence of the tumor mass, the history of the case, et cetera.

Many forms of developmental anomalies of the uterus are recognizable by the bimanual touch. Thus the most frequent and practically important form of arrest of development is manifested by the co-existence of a large cervix and a small corpus, with probably undersized tubes and ovaries.

A uterus unicornis is recognized by normal insertion of the tube and round ligament on one side, while on the other side these structures are inserted into the uterus at the level of the os internum.

I have had occasion to deal operatively with no less than six double uteri. In four of the cases the condition was not recognized previous to operation. In two the diagnosis of double uterus was made by bimanual palpation and confirmed at operation. The diagnosis between a double uterus and a tumor connected with a single uterus is made by tracing the tubes. If these originate from the outer side of either mass, we have a double uterus to deal with. I have ventured the same diagnosis in several other cases in which there was no occasion for proving or disproving the diagnosis by operation or the sound.

In the diagnosis of diseased conditions of the cervix, we are not dependent upon palpation alone; the sense of sight may be brought to our aid. Nevertheless, the various pathological states affecting the cervix uteri: hypertrophy, elongation, lacerations, ectropium mucosæ, inflammation, polypus, carcinoma, et cetera, may all be recognized and distinguished with absolute certainty by the trained finger alone. The vaginal speculum as a diagnostic aid is not needed by the fully competent modern gynecologist.

Hegar's sign, the compressibility of the lower segment of the uterine body, as demonstrated by the bimanual touch, is, in the hands of the expert, a pathognomonic sign of pregnancy in the early months. To go further into the diagnosis of pregnancy would lead us too far. Permit me only to sound a note of warning in the examination of cases of suspected pregnancy. I have more than once known the bimanual *too vigorously applied*, to produce abortion, no instrument whatsoever having been used.

The female bladder can be outlined throughout its whole extent and the presence within it of a tumor, concretions or foreign body can be determined by the bimanual.

With the bladder empty the lower five to six centimeters of the ureters may be palpated, and dilatations and thickenings of that canal, as well as concretions within it, can be distinctly felt. The importance of these findings from a diagnostic point of view can scarcely be overestimated.

Want of time forbids our entering in detail upon the subject of the diagnosis by palpation of the various pathological changes in the pelvic cellular tissue and the pelvic peritoneum: parametritis, perimetritis, hematoma, hematocele. I will merely call attention to two points of great practical importance upon which sufficient stress is not usually laid. The first is the fact that in a first attack of acute peritonitis, pelvic or general, in a woman, our earliest positive diagnostic sign consists in a sense of fulness and fluctuation in Douglas' sac, easily recognizable by vaginal, or better, by combined rectal and vaginal touch. The second relates to cases of carcinoma of the uterus; if the sacral glands can be felt to be even slightly enlarged and tender, the case, no matter how favorable the other conditions may be, is probably beyond the help of operation.

Palpation of the female pelvic organs, although it may have revealed to us minutely and satisfactorily the condition of these organs, is insufficient in itself for a diagnosis complete enough to satisfy the demands of modern gynecology. The entire abdomen calls for careful palpation, especially with reference to the so frequent and important conditions of movable kidney and appendicitis. The other important organs of the body, heart, lungs, kidneys and brain must also be interrogated for evidences of disease. Even when we have thus gone over the whole field, and recorded the results of our physical examination, the diagnosis is not complete. The establishment of a scientific diagnosis calls for an analysis of the subjective symptoms of the patient, with the view of harmonizing them with the objective signs. In other words, each prominent symptom complained of must be traced to its source, and analytically referred to its causative condition, the latter having been determined by physical examination. Only after this is done are the indications for treatment clear, are we able to act intelligently in the attempt to help our patient. This forms a high standard of practice, but progressive modern medicine and modern gynecology are satisfied with nothing less at the present day.

If I have succeeded in impressing upon you this fact, in inciting in you renewed interest and zeal in the diagnostic palpation of the female pelvic organs, and in convincing you that the use of instruments for purposes of diagnosis is unnecessary and *eo ipso* unwarranted in modern gynecology, the objects of this cursory discourse will have been accomplished.—George M. Edebohls, A. M., M. D., in *The Post-Graduate.*

OBSTETRICS.

NEW AND SPEEDY METHOD OF DILATING A RIGID OS IN PARTURITION.

At a meeting of the Obstetrical Society of London, Doctor Farrar (Gainsborough) gave the details of two cases in which he had used a ten per cent. solution of cocaine as an application to the rigid os. In one case he had applied the cocaine after endeavoring vainly to relax the cervix by means of chloral, bromide of potassium and morphia, and the most persistent attempts at digital and mechanical dilatation, with and without chloroform. He decided upon incising the os, and used the cocaine to this end. After five minutes he introduced the finger as a guide to the scissors, and, to his surprise, found the os widely dilated. In the second case, a primipara, forty-eight years of age, he used every effort, as before, to produce relaxation, and waited three days before making the application of cocaine, which was immediately successful. In four minutes the os had yielded. He considered the dilatation to be due to the cocaine in both cases. Doctor Armand Routh said that Doctor Dibbs, of Shankin, had recommended cocaine as relieving the pains of the first stage of labor, and that Mr. Head Moore advised cocaine and boric acid pessaries in cases of rigid os. He himself had found it useful. The president, Doctor G. E. Herman, said that two cases were rather a slender foundation upon which to base a conclusion, but if Doctor Farrar's results were confirmed by further experience, he would have made a valuable addition to our obstretric resources.—*The Lancet.*

THE UNCONTROLLABLE VOMITING OF PREGNANCY.

The last volume of the "Transactions of the American Gynecological Society" contains an interesting paper by Doctor Edward P. Davis, of Philadelphia, on this subject, with a report of three fatal cases. The paper itself and the discussion upon it show clearly the difficulty that often arises in coming to a conclusion whether it is necessary or not to induce abortion. Two of the patients whose cases are recorded by Doctor Davis apparently died undelivered; in the third the uterus was emptied artificially, but the patient died shortly afterward. There are various local therapeutic measures short of interfering with the pregnancy that appear to have been attended with success. Among these may be mentioned elevating and supporting the uterus, either by means of a pessary or by means of tampons, the application of caustics such as chromic acid to the vaginal portion of the cervix or cervical canal, and scarification of the cervix, though having regard to the weak state of the patient in bad cases the loss of even a small quantity of blood is not a matter of indifference. A measure that must be regarded as more severe, inasmuch as it involves a risk of terminating the pregnancy when such a step has not been deliberately intended, is a moderate dilatation of the cervix. In addition to local treatment, Doctor Palmer Dudley, of New York, speaks highly of half-grain doses of cocaine and three-grain doses of monobromate of camphor internally. It must be remembered that even the induction of abortion will not necessarily save the patient if interference is too long deferred. Among symptoms that should suggest the necessity of emptying the uterus are especially the presence of coffee-ground material in the vomit, substernal pain and distress, with marked anemia and emaciation. Yet every obstetrician of experience knows how unaccountably, even when the patient seems in a bad way, sudden improvement may set in, the vomiting ceasing and normal delivery taking place at term. When the symptoms that have been mentioned are well marked, it is better, however, to occasionally interfere unnecessarily rather than take the risk of deferring interference until too late. A therapeutic measure of some clinical value is to impress on the patient that the induction of abortion will be necessary if the vomiting does not cease or diminish by a certain time—three days, for instance. In some such cases, and especially if the patient objects to the operation, an immediate improvement may be observed.—*The Times and Register.*

MEDICAL MELANGE.

METRORRHAGIA AND RUPTURED HYMEN CAUSED BY THE BICYCLE.

THE bicycle craze is spreading writes a Paris correspondent to *The Medical Record,* and several of our most eminent physicians may be seen almost any Sunday morning wheeling gracefully and quietly along the now shady avenues of the Bois de Boulogne. No question has aroused more discussion and difference of opinion in the Academy of Medicine than that of bicycling—indeed it was discussed at several stated-meetings, being warmly advocated by some, and as strongly condemned by others. The consensus of the Academy's opinion seems to be that moderate exercise on the bicycle is advisable in neurasthenia, anemia, dyspepsia, gout, and obesity, in all cases of slowness of nutrition, and where moderate muscular movement is required. It is absolutely forbidden in phthisis, organic disease of the heart, and albuminuria. Married women and young girls are fast following the example set them by the men—the latter, especially. For them it is not ill-suited but dangerous. The writer knows of two cases of metrorrhagia brought on by mild bicycling, and another of ruptured hymen from falling on the pummel. Some have immovable bicycles in their bedrooms, the framework being screwed to the floor and the wheels moving just as on the road. The amount of injury done to the pelvic organs of young girls just reaching womanhood will not be long in making itself felt in the shape of uterine versions and flexions, or cellulitis, to say nothing of other such serious complications as those mentioned above. The Parisian gynecologists will undoubtedly soon have more than they can conveniently attend to if matters continue as they have begun.

A REMEDY FOR BLACK EYE.

THERE is nothing to compare with the tincture or strong infusion of capsicum annuum mixed with an equal bulk of mucilage or gum arabic, and with the addition of a few drops of glycerine. This should be painted all over the bruised surface with a camel's hair pencil and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, this treatment will invariably prevent blackening of the bruised tissue. The same remedy has no equal in rheumatic sore or stiff neck.

DIGITALIS IN PNEUMONIA.

FOSTER, in his address in medicine before the Pennsylvania State Society, said (*The Philadelphia Polyclinic*): "In pneumonia, however, we have the field where digitalis is the remedy *par excellence.* That recoveries from this disease will and do occur in greater numbers when it is treated by large and persistent dosage of digitalis, than occur without its use, seems to be the growing belief in medical practice to-day. In conjunction with strychnine, given in physiologic doses, digitalis is administered until the pulse comes down to 90 a minute. If it can be kept there as a rule recovery will ensue in a shorter time than by the use of other methods of treatment.—*The American Therapist.*

TUBERCULOUS IRITIS.

VIGNES (*Rec. d'ophthal.*, April, 1894) draws the following conclusions: (1) Tuberculous iritis must be distinguished from other varieties of iritis. (2) This form of iritis is premonitory of the appearance of tuberculous nodules elsewhere. (3) Its invasion is insidious, slow, and with but little local reaction, but is accompanied by numerous posterior synechiæ. (4) The absence of pathognomonic symptoms makes the diagnosis difficult. (5) The tendency to spontaneous healing of miliary tuberculosis of the iris depends upon the natural resistance of the iris tissue. The encapsulation of the tubercle and the rapid obliteration of its nutrient capillaries favor its isolation and the protection of the healthy tissues.

A REMEDY FOR DANDRUFF.

A PHYSICIAN thus gives his experience in *The Louisville Medical Monthly:* Having suffered much inconvenience from dandruff, and having resorted to many advertised nostrums and other means for relief, among which were various alcoholic solutions of castor oil, and washing the scalp with solutions of borax and carbonate of potassa, which latter, although effectual from the relief of the dandruff, seemed to impair the vitality of the hair, and cause it to become very sinsibly thinner, was finally induced from my knowledge of the frequent efficacy of sulphur in certain cutaneous affections, to try a preparation of an ounce of the flowers of sulphur in a quart of water, as follows, with the happiest result: The sulphur was repeatedly agitated in the water during intervals of a few hours, and the clear liquid then poured off, with which the head was saturated every morning. In a few weeks every trace of dandruff had disappeared, and the hair became soft and glossy. After discontinuing the treatment for eighteen months there is no return of the disease. The remedy is highly recommended to the profession.

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THE SURGICAL TREATMENT OF HEMORRHOIDS.*

By J. K. GAILEY, M. D., DETROIT, MICHIGAN.

AT the present time, with the wonderful advancement in every branch of surgery and medicine, it is very difficult and even presumptuous, for one to attempt to offer anything new, in the way of operations and treatment. But by the constant addition of suggestions, the result of experience and investigation, to the inherited store of knowledge, this present high standard has been attained. Old ideas and methods are gradually laid away among the records, and the new, more scientific and practical, are made our present guide in practice.

The surgical treatment of hemorrhoids is by no means new. Much has been written upon the subject, many methods of operation devised, and great and prolonged controversy is going on now over the merits of each. I do not expect to present anything new, but to consider only the various methods practiced at the present time, state my preferences, and the way I operate.

Pathologically speaking, hemorrhoidal tumors, whether external or internal are enlargements of the veins of the rectum and infiltration of their connecting tissue, including many times the submucous tissue. The vessels supplying them run parallel with the rectum in the mucous membrane and enter the tumor from above. The so-called arterial hemorrhoids are morbid conditions, and rarely found. I have never seen one.

Whatever the operative procedure upon these tumors may be, the object to be attained is to remove them in the most scientific, practical, and radical manner. Every operator has his preference. One method will be very applicable in certain conditions, while another will be equally successful in dissimilar conditions. So it goes, and a wise surgeon will have his armory well filled with weapons, from which to choose in any emergency. Many methods in the records I will leave, unmentioned, while there are others, still resorted to by some operators, deserving of notice. For example, the écraseur of CHASSIGNAC, the wire of

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* Read before the DETROIT ACADEMY OF MEDICINE.

Maisonneuve, the punctate cauterization of Reeves, removal by the galvanic cautery wire, and repeated dilatation of the sphincters.

All of these have given good results in the hands of their advocates, but I think we have at our command much more safe and practical ones. First, but not foremost in this list, is the injection of carbolic acid. When this method was first introduced, it was thought to be a great remedy; that it would produce a radical cure with less pain and constitutional disturbance than all the others. It was a great boon to the *quacks*. I remember an advertisement I saw in a local paper at Bay City—" A sure cure for piles and all diseases of the rectum without pain, ligature, or knife." I mention this because many Detroit doctors know the advertiser. Unfortunately, the use of carbolic acid has not been as successful as hoped for. Very little is heard of it now and it should be placed with the methods used only in special cases. It is best suited to the soft, well isolated, internal tumors. Not more than one tumor should be operated upon at one time, and care must be taken that the acid does not get into the submucous tissue. The most successful way to operate I think is as follows: Grasp the base of the tumor firmly with a long, curved, narrow-bladed pair of forceps. Then introduce the hypodermic needle at the top, and go down to the base at once, injecting sufficient acid to harden the tumor as you gradually withdraw the needle. Remove the forceps and replace the pile within the sphincters to slough away. I most frequently use a solution of equal parts of glycerine and acid, but a stronger or weaker solution may be used. The long siege of sloughing from repeated injection, the danger from abscess and septic poisoning, have led to many unsatisfactory results. It should be seldom resorted to.

The operation by the ligature is perhaps the most frequently practiced by the profession at large. Specialists have some particular operation which they prefer, and with them the ligature has a secondary place, or special use. For example, in our city one rarely sees the clamp and cautery, or the screw crusher used, but the ligature very often. This may be accounted for by the fact, here as elsewhere, that equally with other methods, it produces a radical cure, and, that it requires no apparatus or special instrument, simply ligature, forceps and scissors, at the command of every physician. The ligature as first applied was simply tied firmly around the base of the tumor, after lifting it well up with the forceps. Or, if it was large, a needle threaded with a double ligature was passed through its base, the needle cut away and each half of the ligature tied separately, and then placed within the sphincters. Afterward an incision was made around the base of the tumor for the ligature, that it might cut through more quickly and cause less pain. Another improvement was to remove with the scissors as much of the tumor as possible above the ligature.

I will give the details of this operation because it is so often performed, and the treatment before and after comprises every detail necessary in all methods. The day preceding the operation the bowels should be moved with any mild but thorough cathartic, the strength of the patient of course considered. Early the next morning a copious warm water enema should be given, and repeated about an hour before the operation. Anesthesia, with chloroform or ether. The position may be either Sims' or the lithotomy. The sphincter muscles are now justly and thoroughly dilated. It should be remembered here, that this procedure is most essential before every method of operation. By it, the operator has perfect control of all the diseased parts. It controls the spasmodic contraction of the sphincter muscles, affording the best conditions for the healing process, and less pain. After the dilatation, the hemorrhoids are seized with tissue forceps and gently held, then with a sharp-pointed pair of scissors separate the tumor from the muscular and submucous tissues, beginning the incision below the tumor, but never below the white line which marks the separation of the skin from the mucous membrane, and carry it up parallel with the bowel, to a point a little short of the vessels that supply the pile, leaving only an isthmus of vessels and mucous membrane. A strong, thin silk ligature is placed in the groove made by the incision, slight traction made on the tumor, and the ligature tied with a double knot as firmly as possible close to the bowel. Some have the ligature ends long, but more cut them short. The tumor above the ligature is now cut off leaving sufficient stump to prevent the ligature slipping. Each tumor is treated in this manner, commencing with the small ones first. The surface should be dusted with some antiseptic powder and the stumps placed within the sphincters. Any hypertrophied portion of the skin that remains may be cut off. If too much of this is cut away there is danger of stricture, or, an eversion of the mucous membrane. I always unite these surfaces with fine catgut sutures. A pledget of cotton placed over the anus and bound tightly in place with a T bandage, affords great relief to the patient and completes the operation.

The bowels must be confined for four days. This is best done with opium in one-half or one-grain doses every two or five hours the first day, diminishing the dose thereafter as the conditions require. I order a fluid diet until the bowels move. A mild laxative given the fourth day is usually sufficient. I prefer castor oil, and in addition to this I order an enema of four or six ounces of sweet oil to be given at bed-time and retained over night. From this time on the bowels must be kept lax and regular. The ligatures slough away in four or five days, leaving a wound to heal by granulation and cicatrization, which takes five or six days longer. During this time the patient should keep a recumbent position. After the first week, in severe cases it is best to introduce the finger to note the progress, and to detect any contraction. If any, gentle dilatation with the finger for several days counteracts this tendency.

The operation by crushing was first introduced by MR. GEORGE POLLOCK, who used a strong pair of forceps. The operation consists in crushing the neck of the hemorrhoid causing its death. That part above the crusher may, or may not, be removed according to the will of the operator. MR. WILLIAM ALLINGHAM and H. W. ALLINGHAM, JR., prefer this method to all others. The ligature is their second choice, and they have looked with favor upon MR. WHITEHEAD'S method, but denounce the clamp and cautery. The instrument they use and have devised is called the "screw crusher." As they describe it, it is a solid piece of steel, with an open square at one end, between the sides of which a second piece of steel slides up and down. This sliding piece is connected with a powerful screw which drives it firmly against the distal ends of the square, producing great crushing power. The tumor is drawn well into the open square by forceps, and the crusher adjusted as far up the neck as possible. There are other crushing instruments but the results attained are the same in all. The only protection against hemorrhage is crushing the tissues, a method not considered safe in other operations, unprotected by cautery or suture.

The clamp and cautery has been used about forty-five years, and has gradually become the most preferred method by many of our leading surgeons. You are all familiar with the clamps used, one devised by **Smith**, and another by **Doctor Kelsey**. In operating each tumor is seized with forceps and drawn forcibly between the blades of the clamps, which are carefully placed at its base and tightened. All that part of the tumor above the clamp is burned off, close to the top of the clamp, with cautery irons, or a cautery knife, heated to a dull red heat. The clamp is gradually loosened, and bleeding points watched for: if any are visible the cautery is re-applied before removing the clamp. The cauterized wound thus made, heals very rapidly, with little pain and rarely any constitutional disturbance. The patients may resume their usual duties after the first week. There is less sloughing than in the carbolic acid or ligature methods, consequently less danger of septic complications. No ligature to slough away, therefore less pain, the healing process commences at once, and the period of convalescence is shortened nearly half. In addition to this the records of **Mr. Smith**, **Doctor Kelsey** and many others show it to be more radical in results. The objection that the application of heat causes pain and constitutional disturbance has not been supported by the results reported in hundreds of cases. I have cauterized the rectums of many children for prolapsus with no physical disturbance and very little pain following. Compared with the crushing method, it is practically the same, with the addition of the cautery which protects against hemorrhage. Of all these methods, therefore, the clamp and cautery seems to me the most *rational*.

There is yet another method recognized in the early records—excision with the knife or scissors, but experience has shown that on account of hemorrhage it could only be applied to the small tumor of the external variety. **William Allingham** says that when the hemorrhoids are small and not numerous, it is one of the best methods because it causes so little pain and heals so rapidly. By this method the pile is simply cut off at its base, the bleeding stopped, and the wound allowed to heal by granulation, a very unscientific method of treating excised wounds.

Excision as devised by **Mr. Walter Whitehead**, of Manchester, England, is very different, and is attracting universal attention. It is described as follows: Produce anesthesia in the lithotomy position, and cause thorough dilatation of the sphincters. By the use of scissors and dissecting forceps, the mucous membrane is divided at its junction with the skin, following carefully every irregularity round the entire circumference of the *bowel*. The external, and the commencement of the internal, sphincters are exposed by rapid dissection, and the mucous membrane and attached hemorrhoids thus separated from the submucous tissue, are pulled bodily down, any individual points of resistance being snipped across and the hemorrhoids brought below the margin of the skin. The mucous membrane is now divided transversely, in successive stages, and the free margin of the severed membrane above, is attached as soon as divided, to the free margin of the skin, below, by a suitable number of sutures. Bleeding vessels throughout are twisted as soon as divided.

The reports from **Mr. Whitehead** and others who have tried his method, are very *encouraging*, but in his arguments for its adoption, he becomes unjust in his criticisms of other methods and I think unscientific. He says that he was led to abandon the other methods, upon the conviction from his *own* experience that they *did not* produce a radical cure, and that they would not because, he considers, the entire plexus of veins, surrounding the hemorrhoidal region of the gut is always at fault. That between the existing tumors there are veinules, ready to expand and form new tumors as soon as the existing tumors are removed.

We know that thousands of cases have been radically cured, by the ligature, clamp and cautery and the crusher, in the hands of most eminent and reliable men. That there are an innumerable number of veinules in the hemorrhoidal region of the rectum, and rectums, that never develop into tumors. And if the cause of the existing hemorrhoids is *not removed*, we must naturally expect, in time, tumors to develop in the new region left by his operation, as quickly as in all others which produce a radical cure. Although it has a most important place in surgery too much must not be claimed for it. MR. WHITEHEAD deserves great credit. It will produce a radical cure as certainly as any other method, and, as modified, I claim it is equally as practical and more scientific. The objection that there may be non-union by first intention, leaving a granulating wound resulting in stricture, is not as serious as it may seem.

The operation as modified by H. ALLINGHAM, JR., and others, reduces this danger to a minimum. After the mucous membrane has been dissected up, an aseptic tendon or gut of medium size is passed first through the skin, then through the base of the mucous membrane flap, back through the mucous membrane again and out at the base of the skin flap, forming a loop. As many of these are introduced as is necessary, and when possible, each loop includes the neck of a pile. The ends are then tied sufficiently tight to stop hemorrhage, and at the same time form a stay stitch. The mucous membrane containing the hemorrhoids is cut off in front of the stay stitches, and the membrane united to the skin with fine silk or gut sutures. Here we have the best conditions possible for union, and good apposition of the parts, without tension. Results, so far, show that you always get healing by first intention in part, and most always in the whole extent of the wound. If there is partial non-union, and the skin has been protected as well during this operation, as it must be in all other operations, you have no more serious conditions to deal with in these *exceptional* cases, than you do in *every* case by the other methods, namely, *granulating wounds*.

The only other objection, that it is a tedious operation and difficult to perform, is a matter of opinion. When the hemorrhoidal tumors form a continuous wing around the gut, with or without distinct lobes, or when they involve half the circumference, I consider this method *less* tedious than any other, and when the tumors are less numerous, I *still* operate by excision, and suturing the wound; and think it equally as simple and as easily performed as any method.

In these cases it is not necessary to remove the whole hemorrhoidal zone, but each tumor separately. The tumor should be seized with tissue forceps and gently extended. A needle threaded with an aseptic medium rigid catgut is passed through the mucous membrane, or skin, if the tumor is external, a little more than a quarter of an inch below the neck of the tumor, along the submucous tissue and out through the mucous membrane at the same distance above the neck. Then cross the vessels that supply the pile, pass the needle through the mucous membrane again from above downward along the submucous tissue, coming out at a point that makes a loop in the shape of a parallelagram. The ends of the loop are now tied sufficiently tight to draw the parts in apposition and arrest hemorrhage. The tumor is removed with scissors a little above the stay sutures and the cut surfaces of mucous membrane or membrane and skin, united with fine catgut continuous suture. Then cut the ends of the stay stitch. In excising a tumor near the *skin*, always leave an abundance of skin flap, and if possible make the incision in the mucous membrane and you then avoid all danger of stricture.

In the cases upon which I have operated in this way, and by removing the hemorrhoidal zone, the wounds have all healed by first intention, no constitutional disturbance, or stricture, and so little pain that it was hard to keep the patients quiet the required time. In addition to the good results obtained, the tumors are completely removed, the hemorrhage controlled, and the wounds treated according to the most advanced scientific methods of aseptic surgery. These conditions are all that can be claimed for this operation over the others, that produce a radical cure.

All things being equal, I think every surgeon will admit that an aseptic wound healing by first intention, is in every way, better for the patient, than a suppurating one. What if the time taken is a few seconds or minutes longer? This fact does not seem to disturb the abdominal surgeon, as he works over his *buried sutures*, and why should we operate upon the hemorrhoidal tumor any differently than upon tumors in any other part of the body? Every operator will have his special method, every method will have its supporters, and time must help the evolution.

THE TREATMENT OF DIABETES.*

By W. R. CHITTICK, M. D., Detroit, Michigan.
VISITING PHYSICIAN TO HARPER, AND SAINT MARY'S HOSPITALS.

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It is not my intention or desire to open an argument concerning the etiology or pathology of diabetes, but rather to consider its treatment, based upon an experience with four cases—all of which came under my care within the past two years.

In order to facilitate the consideration of this part of our subject, I will first give a brief résumé of the symptoms I observed in each case, and follow with the special treatment I employed in each of them.

Case I.—Mr. A., aged forty-seven years; American; nervous temperament; of fair physical strength. He became ill about two years ago with pronounced symptoms of "neurasthenia." His recovery was slow and tedious. This was not strange, since he was at that time passing through the trials of our recent financial disturbance. He had much at stake and the nervous strain proved greater than he could master—either mentally or physically. On account of a long-standing kidney lesion, of an accidental nature, which constantly showed the presence of albumin in his urine, I was in the habit of frequently examining it. This watchfulness extended over a period of about eighteen years. It was begun by my predecessor, Doctor George P. Andrews. This tends to prove that my patient's previous condition was thoroughly understood. Up to this time no sugar had ever been discovered in his urine.. Soon afterward, however, my attention was called to the sudden development of an insatiable thirst in this case. I found then that my patient was consuming daily between three and four gallons of liquids, and that he was also voiding an enormous quantity of urine, at very frequent intervals. Examination of his urine disclosed the presence of about 4.5 per cent. of sugar.

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* Read before the Detroit Academy of Medicine.

Of course I was greatly surprised with this sudden pathological development. I had observed a considerable loss in weight during this recent illness but I thought little of that fact. I immediately adopted prompt and strict measures to meet this new complication. I first placed my patient upon an antidiabetic diet. The sudden change in diet did not at first agree with my patient, so I compromised with him, and allowed him to partake of corn-bread quite freely. It is always a serious matter with such patients to be suddenly deprived of *all* starchy food. It is best, I think, to provide for a gradual change. Otherwise some complications are likely to ensue.

Therapeutically, I prescribed for this patient the alkaloid of codeine in one-third grain doses, combined with iodole in two grain doses, thrice daily. Contrary to all my previous experience, the codeine caused nausea in this case. I was obliged, therefore, to continue with only the use of the iodol. The patient did exceedingly well under this treatment, and the quantity of sugar in his urine was soon reduced to about one-fifth of one per cent. One feature in this case was very noticeable; it relates to the increased amount of sugar following upon any undue amount of physical exercise.

Late last summer this patient visited the sea-shore for five or six weeks. He returned with an increase in weight of ten pounds. Lately he has been able to take the codeine. Consequently his condition is much improved. He now presents a very good appearance generally. I think it possible for him to yet enjoy several years of happy life in this world.

CASE II.—MR. B., aged forty-five years; rather stout; and active temperament; merchant; American. This patient called me to his office about thirteen months ago, when he complained of great lack of energy, and said he had been losing in weight during the previous six months. I asked regarding his thirst for water and he answered: "Come to think of it, I do really drink considerable water during the day, and two or three during the night also." He acknowledged passing his urine frequently, and in copious quantities. But these unusual symptoms did not excite his notice or curiosity, but when I asked him to save the amount passed in twenty-four hours the quantity surprised him greatly. Examination revealed, of course, a large percentage of sugar.

There was no doubt in my mind regarding the diagnosis of this case, so I put him also upon fairly large doses of codeine and iolol—from one to two and one-half grains of the former and one to two grains of the latter—four times daily, as indications demanded. He has continued the remedies ever since, with some slight additional medication to meet concomitant symptoms. His progress, as a whole, has been entirely satisfactory, and I doubt if the most acute insurance examiner could now discover any physical lesion sufficient to disqualify him from receiving any amount of insurance upon his life. Indeed PROFESSOR JANEWAY, of New York, to whom I once referred him, could discover no pathological lesions whatever, although I had informed him what to seek.

There were two occasions, during my care of this patient, when I was compelled to combat serious but unavoidable complications. In one instance I was pursuaded to consent to his making a short trip to Europe. The effect was exceedingly discouraging to him. On the outward trip he was obstinately constipated. Hemorrhoids ensued. He consulted a Liverpool physician regarding this new complication, and was informed by him that he had a rectal ulcer, which indicated constitutional tuberculosis. Of course he was greatly depressed by this unexpected (but erroneous) diagnosis, so he made great haste to return home. Subsequent examination revealed to me only a slight erosion of the mucous membrane of the rectum, which soon yielded to appropriate treatment. The second instance was the removal of his large business. On both these occasions it was necessary to largely increase the dose of codeine—sometimes nearly as high as three grains three times a day—in order to control the disturbed condition of the urine.

This patient has been allowed oatmeal for breakfast for over three months, and also potatoes once daily for over two months. I expect him to recover entirely. Later on I intend to make a detailed report of this case.

Case III.—Mrs. C., aged sixty-seven years; illiterate; widow; Irish. This woman came to me last fall complaining of great thirst. She said she felt like keeping her mouth under the pen-stock all the time, day and night. Her urine showed about five per cent. of sugar.

I put her on codeine and iodole and the sugar soon disappeared, as well as her excessive thirst, and it has remained so ever since although she stopped taking medicine some time ago. She continues dieting, however. I presume she will go on in this way for two or three years. However, this is only a guess. Some intermediate illness may carry her off sooner, although she has gotten through two severe attacks of influenza since the attack of diabetes began.

Case IV.—Mr. D., aged seventy years; a professional man. In fact he is a retired physician. I saw this patient only occasionally, as he is not a resident here. He consulted me principally, although he also consulted other Detroit physicians. Whenever he did so, however, he most always came to me afterward, in order to test any difference of opinion that he felt might have existed. As is too often the case with physicians who are ill, he was always in a state of "chronic doubt." But patience, and quiet little talks, did much to retain his confidence, not only in myself, but in the profession in general.

His urine showed varied amounts of sugar—accordingly as he followed the rules of prescribed diet. When content to abstain from "forbidden fruit," he did very well indeed, considering his constitutional condition. He would always improve when he continued the use of codeine. Sometimes he imagined this drug made him appear dull, and then he would cease its use for a little time. Under those circumstances I prevailed upon his using iodol instead. This latter remedy seemed to fill the place of the first one but, of course, with diminished results. When last seen, he informed me that he was taking codeine regularly, and his appearance indicated as much.

In conclusion, I must say, in truth, that from my limited experience in the treatment of diabetes, the remedial value of codeine has not been exaggerated. It is a safe remedy to prescribe, under other conditions as well, and as a substitute for opium. I have used it freely during the past thirteen years, and have yet to find a single case where a habit for this drug was induced. Next to codeine, I have found iodol to be the best remedy in diabetes. I obtained this hint somewhere in my general study of this disease; I cannot now remember just where. Just why codeine and iodol should have any similar action in this pathological condition, I will not venture to say. Their chemical composition is entirely opposite. One is wholly an organic substance, while the other is composed mostly of iodine. I seldom now use ergot because I could barely see any good effects from it. But after all I believe that proper diet is the best possible remedy for diabetes.

THE DIAGNOSIS AND TREATMENT OF NON-SURGICAL GYNECOLOGICAL CASES.*

By J. H. CARSTENS, M. D., Detroit, Michigan.

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Formerly the treatment of gynecological cases consisted of putting a speculum into the vagina, painting some tincture of iodine around the os, or passing a small stick of nitrate of silver up into the uterus and allowing it to melt there and destroy the tissues. This routine treatment was sometimes varied by the introduction of the pessary for a displaced uterus, or the use of sulphate of zinc, or lead solutions as injections. But in the evolutionary process of progress, with a better knowledge of the causation of diseases, this form of treatment has gradually given way to surgery, and to-day gynecology is in the hands of specialists, and consists almost exclusively of surgical operations, sometime of the most complicated and brilliant kind, while the purely medical and palliative treatment remains in the hands of the family physician. Surgical and mechanical treatment is the rage to-day; the mild, soothing, and less dangerous method of procedure by medication, internal or external, is on the decline.

The general practitioner should have a very clear idea of the causation, diagnosis, and treatment of the non-surgical diseases of gynecology, so that he can treat them himself. Still, he should be able to diagnose properly when a case ceases to be purely medical and becomes a surgical one, so that surgical means may be employed promptly, and not when too late as is so often the case.

In enumerating a few of the ordinary cases which do not require surgical interference, we might start with affections of the vulva. The vulva is subject to inflammations—simple and specific. The simple variety are very often found among small children, but can be easily relieved by soothing washes, such as borax, boric acid, lead water; or, if the parts are exquisitely tender, cocaine solution can be applied, or astringent ointments such as carbolized vaseline, zinc ointment, and so on. Those cases occurring in children are often due to reflex action; worms, especially pin-worms should always be looked for and properly treated. The specific variety can generally be recognized by the acuteness of the symptoms and the history of the case. And still many cases of simple vulvitis come on suddenly and with great severity so that the most careful bacteriological examination should be made in order to decide in which category to place them, as the specific variety requires the most energetic and prompt treatment.

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* Read before the Saginaw County Medical Society.

What I have said about the treatment and diagnosis of vulvitis is also applicable to vaginitis. In all doubtful cases, consider the inflammation specific and treat it energetically until by your bacteriological examination you are convinced that it is benign. I have found the best results from permanganate of potash given as an injection and also applied with gauze or absorbent cotton, keeping the parts moist. But the solution must be *weak*. The tendency and mistakes of physicians are to make it too strong. Five grains to the pint—at the most eight grains—is all the mucous membrane will bear. It must be applied frequently, or be kept constantly in contact with the parts, and in the course of a few days, when all the acute symptoms have subsided, other germicidal solutions may be used, such as the bichloride of mercury, 1–3000 or 1–5000, and then, after the symptoms have entirely subsided, it is best to carefully cleanse and dry the parts and paint them thoroughly with pure tincture of iodine, especially if there is the least doubt about every particle of the virus having been destroyed. This should be done under an anesthetic in cases where the whole vagina is involved, or a solution of cocaine may be employed to prevent pain. If the vagina is the seat of the specific variety, the greatest attention should be taken not to allow it to pass up into the uterus, hence persistent irrigation and douching should be practiced. Occasionally a speculum should be inserted, the uterus thoroughly cleansed, and the mucous membrane swabbed with tincture of iodine or pure carbolic acid. This will prevent the microbes from migrating to the Fallopian tube and causing trouble.

If the general practitioner would give vulvitis and vaginitis more attention, and treat them more heroically, being careful to diagnose between the specific and the unspecific variety, he would do more to reduce the work of the abdominal surgeon than anything else we know of at present. A great many of our abdominal sections are made necessary by specific infection, and we have grave doubts if not all the pelvic diseases—as the ovarian, fibroid and other tumors—do not really have the gonococcus for a nucleus.

The eruptive diseases are, lichen, a papular disease of not frequent occurrence; eczema, found in conjunction with the same disease in other parts of the body; and acne and erythema, which are benign. All these simply occur because the disease is constitutional and occur only on the vulva, as a rule, when other parts of the body are affected.

Elephantiasis and chancres are surgical, and therefore are not to be considered.

Pudendal hematocele occurs as the result of blows and falls, and is often marked by an immense amount of extravasation of blood in the cellular tissue. This simply requires rest and soothing, cooling applications such as the lead wash, and, as a rule, it soon subsides.

Pruritus vulvæ is the most troublesome disease with which a woman can be afflicted; the terrible constant itching is something beyond endurance in many cases, and the treatment has been so unsatisfactory, that, in spite of all our progress, we can do no more for it to-day than we could a quarter of a century ago. The usual remedies which have been handed down for generations are still employed and with but limited success. Hydrocyanic acid, creosote, carbolic acid, zinc oxide, balsam of Peru, sulphurous acid, and a mixture of camphor and carbolic acid of equal parts, sometimes give temporary relief. Cauterization with nitric acid has been tried without benefit; in fact, the disease has lately been relegated to the surgeon. My friend, SAENGER, of Leipsic, has devised a method for removing the mucous membrane, including the labia minora, and claims most brilliant results.

Then we have another eruptive disease in the genital region, herpes pudendalis, which is not very troublesome, but in some patients recurs every few months, and indirectly causes much heartache and false accusation. If a few of the vesicles are close together and coalesce, they look very much like a specific sore. Or if two or three vesicles are irritated by the secretions, they become larger and look like a number of chancres. Physicians very often make mistakes in diagnosing these cases and should be more careful. Quacks always diagnose them as very severe and frighten patients. The husband will often accuse his wife of unchastity on account of a herpetic eruption when she is perfectly innocent. These cases generally subside in a week or ten days. For treatment I generally use tanic acid, one-half drachm; cold cream, one ounce; the mixture to be applied frequently during the day. Many cases seem to be of a malarial origin, and in such I first give quinine and follow this with FOWLER's solution.

Taking the diseases of the uterus itself, we have endometritis, which is comparatively rare to-day, although formerly it was quite frequent. We now find it caused by laceration of the cervix and a cure cannot be effected without surgical interference. Cases of plain endometritis are rare; in fact those of us who are bacteriologic enthusiasts think that all cases of inflammation of the lining membrane of the uterus are due to microbic infection, therefore, the treatment is clearly indicated—the use of all those remedies which will destroy the microbes in the uterus. Carefully cleaning the mucous membrane of the uterus, I use pure tincture of iodine; not LUGOL's or any other solution. This repeated every three days, will cure most cases in a few weeks. If, however, the hypertrophy of the mucous glands has taken place, it requires curetting and becomes surgical. In cases of areolar hyperplasia, and so-called chronic metritis, the application of iodine to the vagina and the cervix, and the use of tampons saturated with a solution consisting of one-half ounce of potassium iodide; one-half ounce of ammonium chloride, and four ounces of glycerine will decidedly diminish the size of the uterus and lessen the dragging pain. But such cases are never absolutely cured until the menopause is established and the periodic monthly congestion ceases.

In anterior displacement of the uterus, I have never used a pessary as I have not seen a case requiring it. Anterior displacement might be complicated with descent, and in such case a pessary would be required for the latter. For retroversion of the uterus, plain and simple, a pessary will often give wonderful relief, and sometimes effect a permanent cure if it is treated shortly after childbirth. But as a rule, in my experience, these cases are incurable, nearly all being complicated with adhesions and displacements of the ovary and inflammation of the tube; generally the tube, ovary and uterus are matted together with the rectum. These cases are sometimes *relieved* by massage, the use of the tampon above mentioned, and by electricity, but the distressing symptoms soon return after the treatment ceases, and only the removal of the diseased ovary, on whichever side, and ventral fixation of the uterus will give relief.

This about covers the ground of the non-surgical gynecological cases we may now meet with; in fact, it is hard to draw the line as nearly all cases require, more or less, surgical interference. Endometritis generally requires curetting, and vulvitis and vaginitis are often complicated with inflammation of the vulvo-vaginal gland, which requires extirpation or thorough curetting, and cauterization. Vaginismus and pruritus frequently require removal of the carunculæ myrtiformes. Hence, as I stated at the beginning, the non-surgical merge into the surgical, and the former are noticeably decreasing, while the latter are becoming more numerous, simply because we have better knowledge of the etiology of these diseases.

PLACENTA PREVIA.*

By WALTER J. CREE, M. D., Detroit, Michigan.

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Placenta previa is an event of sufficient frequent occurrence to engage our earnest attention. I believe this subject has not been before the Academy in several years, and, thinking a discussion of the subject would be of interest, concluded to present it briefly.

For convenience of study and reference the insertion of the placenta in the lower segment of the uterus is divided into three classes: (1) Central or complete; (2) Partial; (3) Lateral or marginal; all of these varieties depending on the amount of surface overlapping the os. Different writers have given various classification, but this is immaterial as the clinical features presented to us are about the same, only in the first variety the hemorrhage is more profuse. When the placenta is situated low down in the uterus, yet not low enough to constitute placenta previa, we have not the unavoidable hemorrhage as in placenta previa, but a considerable chance for the undue loss of blood, and it is said this occurs quite frequently.

The causes leading to placenta previa as far as I can learn are not definitely known. A number of theories have been advanced by different writers, such as arrested abortions; large size of the uterus caused by frequent pregnancies, whereby complete involution does not occur. A subacute inflammatory condition of the lining membrane of the uterus is said to favor the low implantation of the placenta. The majority of the cases occur in multiparæ. Abnormal presentations—such as breech and transverse—are very apt to occur in these cases.

The proximity of the placental site to the vagina is said to favor septic infection. Post-partum hemorrhage is also more likely to occur.

The danger in complete placenta previa is great to both mother and child; in the other varieties the danger is lessened.

The occurrence of hemorrhage during pregnancy should invoke our earnest inquiry as to the possibility of placenta previa. I have not had the opporunity of seeing a case before labor, and would like to know at what time previous to full term the condition of placenta previa can be determined.

In regard to the treatment I will say nothing except as given in the cases reported. Doctor Ford, in *The American Journal of Gynecology*, advocates Caesarean section in some forms of placenta previa. The following cases have come under my observation:

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* Read before the Detroit Academy of Medicine.

Case I—Partial Insertion of Placenta.—I was called in consultation, and recognizing the portion of overlapped placenta, it was pushed up and aside. The head engaging as a plug, it was thought best to deliver quickly, and forceps were used. The mother and child in good condition.

Case II—Partial Placenta Previa.—This case was similar to the previous one, only that forceps were not used to complete labor.

Case III—Complete Placenta Previa.—Mrs. C., aged thirty-one years. It was her third pregnancy and third confinement—all previous ones being normal. I had been engaged to attend this case, but during my absence another physician was called in. The hemorrhage was considerable and he at once tamponed, and solicited my assistance. On arriving at the house the tampons were removed and the condition of things noted. The os was partially dilated, and the case was one of transverse presentation. The vagina was again thoroughly tamponed and one-eighth grain of the sulphate of morphia was given to quiet the patient until a supply of chloroform could be obtained. The patient was unable to bear the morphine, and soon began to vomit profusely. This increased the pain, and the tampons were expelled, the hemorrhage at the same time becoming alarming. Nitroglycerine and brandy were given hypodermically, and the patient chloroformed. I introduced my hand through the placenta, turned and delivered a dead child. The placenta soon followed. I believe this specimen was shown to the Academy the evening of the day that this case occurred.

The patient was given a hot bichloride douche. The recovery was uninterrupted and complete. In this case, on September 20, there was some hemorrhage and slight pain. I requested an examination and explained why it was necessary, but this was not allowed. I therefore gave viburnum prunifolium with apparently good results; the pain was relieved and the hemorrhage ceased.

On the 12th of October there was another attack of flowing and some pain. I was not called but the patient took the viburnum prunifolium, and the trouble soon ceased. The confinement did not occur until the 2d of November.

Perhaps I have been fortunate to have met with these three cases. While I realize that experience is the best teacher, I am not particularly anxious to meet with many cases like the one last mentioned.

A NEW OPERATION FOR HEMORRHOIDS AND PROLAPSED RECTUM.*

By B. MERRILL RICKETTS, M. D., Cincinnati, Ohio.

[Published in The Physician and Surgeon exclusively]

The object of this paper is to present means more simple than have heretofore been offered for the radical cure of a prolapsed rectum and the obliteration of hemorrhoids.

It is first necessary to understand the anatomy of the pelvis, and especially the rectum and its immediate environments and the causes of these two conditions. It being taken for granted that the practitioner possesses this knowledge, a brief explanation is all that is necessary to understand how to proceed in the first.

Hemorrhoids.—After widely dilating the sphincter with the fingers under surgical anesthesia, a large semicircular needle is passed subcutaneously from

* Read before the Surgical Section of the Mississippi Valley Medical Association, at Detroit, Michigan, September 3-7, 1895.

the mucocutaneous line to the upper border of the pile-bearing area and then returned to make its exit at the point of entrance; the needle is then removed and the silk ligature made taut about the venus plexus, and the ends left hanging out. These ligatures may be from one-half to an inch apart, as the case may require. It is not necessary to tie all the varises in this way, as the atrophic changes will necessarily obliterate the remaining ones. No tissue is sacrificed; the mucous membrane remains intact; there is no hemorrhage, no infection, no pain of consequence, and the loss of time practically nil.

While the operation is absolutely radical and without any serious consequences, the sutures are allowed to come away of their own accord. The operations made in this way for this condition have resulted in an absolute cure, and the patients have experienced but little pain during the life of the ligature.

PROLAPSED RECTUM is treated in the same manner, except a greater number of ligatures are required. If they are properly and evenly adjusted, the atrophy of the tissues is symmetrical, and the pathological condition is relieved without stenosis.

It is of course necessary to pass the needle somewhat deeper in cases of prolapsus than it is in hemorrhoids pure and simple. The time required, however, for prolapsus, is greater than that for hemorrhoids, it sometimes being necessary for a second sitting at an interval of from four to eight weeks to correct the deformity.

It may be that kangaroo tendons, chromatised catgut, silkworm-gut or silver will answer the purpose better than silk. Nothing but experience, however, will settle this question.

Two operations for congenital prolapsus of the rectum to an exaggerated degree have resulted most satisfactorily. It to is be hoped that this or some other procedure will supplant the operation of WHITEHEAD, or the so-called infamous American operation. The sooner these two operations are relegated the better it will be for the laity, and the subsequent operations will be fewer to remunerate the rectal surgeon.

TRANSACTIONS.

DETROIT ACADEMY OF MEDICINE.

STATED MEETING, JUNE 11, 1895.

THE PRESIDENT, ARTHUR H. BIGG, M. D., IN THE CHAIR.
REPORTED BY W. B. SPRAGUE, M. D., SECRETARY.

DISCUSSION OF PAPERS.

DOCTOR CHITTICK read a paper entitled "The Treatment of Diabetes." (See page 438.)

DOCTOR RUSSEL: It is generally held that saccharine foods should be prohibited in diabetes, but I believe that they are harmless. I have never interdicted the use of sugar, and yet I have had as good results as anybody in the treatment of this disease. My treatment consists in attention to the digestive organs and the assimilative functions, and the administration of some form of hyoscyamus.

DOCTOR DUFFIELD: I have had some very marked cases of diabetes showing the disease in a new phase. In one case a lady complained that she wanted to sleep every time she sat down, and that she tired very easily. Upon inquiry it was discovered that she passed large quantities of urine. It was found that she passed eighteen quarts daily containing sugar in the proportion of thirty grains to the fluid ounce of urine. She has been on a treatment of codeine and ergotin and is very much better, and gaining flesh. The quantity of urine is reduced to four quarts and the proportion of sugar to two or three grains per fluid ounce. Another patient came to the hospital complaining of symptoms of diabetes. In this case I found two per cent. of sugar and albumin as well, in the urine, but there were no casts or renal epithelium. The heart is enlarged and weak. He has not lost flesh. If the proportion of sugar decreases the albumin increases in quantity and the reverse. He has been on a diet of meat and vegetables without starch. Of late the specific gravity is 1125 and the precipitate of reduced copper greater than in many months. I have given him codeine and also digitalis on account of the heart. There are times when the pulse is barely perceptible. When albumin is present the face and extremities bloat; then these renal symptoms wholly disappear. This patient is intemperate and uses a large amount of sugar with his whisky when he has a drinking spell. Still another patient had an attack of acute nephritis with bloating of the face and abdomen. He went to Carlsbad and improved so much that when he returned there was no albumin in the urine but the specific gravity was 1032 and it contained considerable sugar. To-day there is no sugar, but the specific gravity is high and there is an excess of urates. Last fall I saw a man who was rapidly approaching narcosis in the latter stage of diabetes. He was reduced to a mere skeleton. For a long time and until death the specific gravity of the urine was 1030 and it contained a large percentage of sugar. The heart was feeble. We sometimes overlook the condition of the heart in its relation to diabetes and fail in treatment. In many cases heart tonics are the prime indication.

DOCTOR HITCHCOCK asked what specific action the writer of the paper attributed to the drugs whose use he advocated (codeine and iodol.)

DOCTOR CHITTICK replied that he could not clearly say. The codeine is sedative and the iodol is probably alterative.

DOCTOR CONNOR: I was last week riding with a prominent citizen of Bay City who formerly weighed two hundred and eighty pounds. For some time, however, he has had periodic attacks of diabetes and is much reduced. He says he can always tell when he is about to have a diabetic attack—that he first has uric acid deposited in the urine in large quantities. He is now ordering his life to avoid the uric acid deposit and so wards off the excretion of sugar. I was in hopes that DOCTOR CHITTICK could throw light on the etiology of the disease. I believe this is still a mooted point. I know a man who has sugar in his urine one day and the next day there is none. He is restricting his diet according to the regimen of diabetes and yet has sugar after dinner—after supper none. Some years since a patient from another part of the state thought I had cured him of diabetes and many cases were sent to me from that vicinity. My principal treatment was tonic and nutritive, but I gave a little morphine. That was before the time of codeine. I agree quite closely with DOCTOR

Russel in his ideas of treatment. But all my patients died from diabetes or intercurrent affections. One case had diabetic cataract. He was a Methodist exhorter but a very sensual man and indulged all his passions freely. I preached the doctrine of Moses to him with power and scared him into a more temperate life. The cataract cleared up and he was quite well for many years after. He died of an intercurrent affection. A large number of deaths attributed to heart failure are no doubt old cases of diabetes. In some cases the cause is found in a lesion of the nervous system, but in most cases we are still at sea. I believe that a large proportion of cases originate in over-indulgence in eating and drinking. The food is not assimilated and so acts as an irritant to provoke the disease. Great financial strain undoubtedly causes the disease in many cases.

Doctor Sprague: While I was in Waukesha a patient came to me from Nebraska and announced that she had suffered for some time from diabetes. I found that she was passing one-half pound of sugar daily. She had lost one hundred pounds of flesh within the year. I gave her tonic treatment and directed her to drink freely of Waukesha water. Under this treatment the sugar entirely disappeared and she considered herself cured, but I heard that she had relapsed two or three years later. I saw many cases benefited at Battle Creek, but so far as I know they all died of diabetes. I believe that all these patients do die of it or its consequences.

Doctor Russel: One of the cases to which I referred was my wife. She was a very bad case of diabetes. She went to Europe and returned seemingly well, but in a few days she sank and died.

Doctor A. H. Bigg: I am glad to indorse Doctor Duffield's advice, to fortify the heart. My experience has taught me that I have no objection to offer to Doctor Chittick's treatment, but I think codeine is superior to the other alkaloids of opium only in that it disturbs the stomach less. I would pronounce emphatically against antipyrin sumbul, et cetera. I have found antipyrin to do harm. As to diet I am inclined to Doctor Russel's opinion. I have come to yield to the patient's pleadings for more liberal diet. I think the disgust for food caused by diabetic diet more than balances the benefit received therefrom. We must all concede the mystery surrounding the causation.

Doctor Chittick: I believe the disease usually originates in the brain in consequence of over anxiety and great mental strain. This was evident in the majority of my cases.

EXHIBITION OF PATIENTS.

Doctor Connor introduced Mr. G. A. Lewis to the society, who presented a class to illustrate the benefit of his treatment for stammering.

STATED MEETING, JUNE 25, 1895.

The President, ARTHUR H. BIGG, M. D., in the Chair.
Reported by W. B. SPRAGUE, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Gailey read a paper entitled "The Surgical Treatment of Hemorrhoids." (See page 433).

Doctor Noyes: I feel myself hardly prepared to open the discussion on the interesting and able paper just read. While I may claim some knowledge of the literature of the subject from reading, I have practically but little experience with the different methods of operating for hemorrhoids so lucidly described in the paper. In one case carbolic acid was used with success by the method described in the paper. I have also used it to destroy or disperse vascular tumors elsewhere. The écraseur, which is mentioned in the paper, was invented by CHASSAGNAC about the time I was a student in Paris, in 1858. He used it in almost every kind of surgery. I brought one home with me and have used it in operating for hemorrhoids and also in castration. Incidentally I may say that I introduced it into veterinary surgery in this country. To do so, I performed a number of castrations on horses myself, before veterinary surgeons, on a stock farm near the city.

DOCTOR MANTON: I have listened with great interest to the doctor's most excellent paper. I have always considered the injection of carbolic acid a dangerous method of treating hemorrhoids. I have known untoward results to follow its use. It must, at least, be used very carefully. Nor have I looked upon the ligature with favor. I saw many cases in hospitals treated by it, and felt that it was unscientific treatment. It left an ulcer which might be a long time in healing and result in troublesome cicatrices. I have used the clamp and cautery with eminently satisfactory results. Only a small granulating surface is left. As to WHITEHEAD'S operation, there is only one class of cases in which it is eminently successful, namely, those in which there is a redundancy of membrane. Where we have difficulty in pulling down the membrane we do not get union by first intention, and the operation is the most bloody and painful that I have ever done. I remember one case in which I could not relieve the pain for two or three days, but the results were satisfactory. I wish DOCTOR GAILEY had mentioned capillary piles. We often meet them—small bleeding spots—not tumors. The most successful treatment I have found for them is the PAQUELIN cautery, followed by an unguent and aristol. Nitrate of silver is also a good remedy, but some cases are not easily cured.

DOCTOR HITCHCOCK: I am a living monument, as it were, to the value of the carbolic acid treatment. I was treated by this method for a bad case of hemorrhoids many years ago, and I cannot recall much pain or that the process of healing was tedious. I only remember a little tenderness for about three days. The treatment does not seem to me very dangerous if the tumors are clamped sufficiently long.

DOCTOR AARON: I recently saw POWELL inject carbolic acid, and heard him say that he now prefers it for all cases. He gave no anesthetic, and took plenty of time. In contrast to this, KELSEY followed him with the clamp and cautery, operating under an anesthetic in two or three minutes, declaring that carbolic acid is barbarous.

DOCTOR BIGG: I think the Academy is to be congratulated for having the privilege of listening to this excellent paper. I shall go home with a much clearer conception of the technique of these operations. The operator will be the recipient of a degree of gratitude if the operation be successfully performed.

DOCTOR GAILEY: I thank you, gentlemen, for the cordial reception you have given my paper. In regard to the capillary hemorrhoid, I have not had much experience. I remember that nitrate of silver is advocated. It forms a deep and firm scar. But I think I should prefer the cautery.

STATED MEETING, SEPTEMBER 10, 1895.

THE PRESIDENT, ARTHUR H. BIGG, M. D., IN THE CHAIR.
REPORTED BY W. B. SPRAGUE, M. D., SECRETARY.

DISCUSSION OF PAPERS.

DOCTOR W. J. CREE read a paper entitled "Placenta Previa." (See page 444).

DOCTOR CLELAND: I have had a few very unpleasant experiences with placenta previa, and feel, with DOCTOR CREE, that the fewer I have in the future the better. In coming upon such a case a man must have his wits about him to avert disaster. He is usually called so late that nothing is left to be done but to act. In cases of central attachment, to be sure, the early hemorrhage gives warning, perhaps several times, but this is not always so in cases of marginal attachment. The percentage of deaths from central implantation is greater than in any other condition except rupture of the uterus. Even if the life be saved at the time we have still to dread septicemia after. The treatment outlined by DOCTOR CREE is the proper one.

DOCTOR MANTON: I was disappointed that DOCTOR CREE did not give some statistics. I believe the fetal mortality is seventy per cent. to eighty per cent., but I have forgotten the maternal. As nearly as I can remember only one case occurs in 1500 to 1700 confinements. [DOCTOR CREE: I think the latest is one in 500.] The etiology has never been satisfactorily settled. It is difficult to understand why the ovum is not able to attach itself where it should, at the cornu. I am convinced that chronic endometrial inflammation, having gone on until even the muscular structures are involved, is the chief cause. Here the epithelium is all gone and the ovum slips down to the vicinity of BANDL's ring. But the interesting question to me is, If the epithelium is destroyed how can the spermatozoa reach the ovum in the tube, where conception must take place if at all; for if the ovum reaches the womb unimpregnated it is blasted? The decidua serotina does not form, and it is cast off, having no means of attachment without the formation of these folds in the mucous membrane. I do not think many cases come to our attention before the beginning of labor. As DOCTOR CLELAND has said, the mortality is very large as to the fetus, and therefore Caesarean section has been conceived and practiced in some quarters with the result of saving both mother and child. But the operation is a serious one, and I believe, with DOCTOR CREE, that the usual procedure should be to penetrate the placenta, turn and deliver as soon as possible. I have not had any infants live. DOCTOR CHITTICK had a case, reported in 1884, which I saw with him in consultation, in which the child was born asphyxiated, but could not be resuscitated. It seems to me that Caesarean section offers the only hope of saving the child in a good many instances. Only a few days ago I saw an interesting case of placenta previa at the Woman's Hospital. A colored woman, an inmate of the hospital, got up during the night to pass her urine. A few minutes after her return to bed she felt a gush of blood from the vagina. There was a small, irregular hemorrhage for several days. Finally I delivered by the method DOCTOR CREE advocates. The mother did well, but the child was dead. The implantation of the placenta was marginal, but a separate flap projected two or three inches beyond the os, making it virtually a central implantation.

DOCTOR MAIRE: One of my first cases was a case of placenta previa, and I called the late DOCTOR GILBERT to assist me. I was impressed by the ease with which he separated the placenta and turned and delivered the child. In my second case I lost both mother and child, but in my third case they both lived. I have learned that the introduction of the hand through the cervix checks the hemorrhage.

DOCTOR CHITTICK: I never had so great a load of anxiety as between the diagnosis and delivery of my case which DOCTOR MANTON has mentioned. I made the diagnosis a week or so before we delivered the patient. DOCTOR MANTON recommended tamponing in this case, but I should now follow DOCTOR CREE's advice. I have had one other case in which there was a slight marginal attachment.

DOCTOR HITCHCOCK: I attended a case for DOCTOR LONGYEAR in which there were several preliminary hemorrhages. I did not deliver the patient, and I do not know how it turned out. Beyond that I have had no experience.

DOCTOR BIGG: I had a case of marginal implantation in which I packed the vagina, and I lost neither mother nor child.

DOCTOR MANTON: There has been a great deal of discussion about tamponing. There is an element of danger in the possibility of the hemorrhage working upward and causing still further detachment of the placenta, but this can be avoided if the patient be carefully watched. It is better to use a rubber tampon, such, for instance, as BRAUN's culpeurynter. If I have reason to believe that a woman is liable to have placenta previa I should give preliminary treatment and restore a healthy mucous membrane.

EXHIBITION OF PATIENTS.

DOCTOR DAVID INGLIS exhibited three infants manifesting idiotic symptoms, principally in the form of forced, purposeless, athetoid movements. The children are inmates of the Foundling's Home in the city, and two of them are illegitimate. They are all slow in cutting their teeth. DOCTOR INGLIS thinks that the movements must be an automatic discharge of muscular energy.

DOCTOR MAIRE suggested that the head movements might be due to some abnormality of the semicircular canals.

DOCTOR ROBBINS thought that if such were the case the motion would not stop, as it does when the attention is attracted.

DOCTOR MAIRE thought it might if the irritation were moderate.

EDITORIAL ARTICLES.

PROFESSIONAL SECRECY.

THE matter of professional secrecy has recently been commented upon to some extent in the home and foreign press, and it is asked, do doctors and lawyers invariably keep the secrets entrusted to them in their professional capacity? It seems to be generally admitted that they do, and it is at least satisfactory to believe that the maintenance of honor in regard to confidences is one of the commonest virtues. The doctor may be a quack, or the lawyer a shyster, and yet they do not as a rule betray confidences. Doctors as a rule are not gossips, and people have every reason for believing that the consulting-room is like the confessional, a place from which no news ever issues.

Every one probably remembers the story of the cardinal who told an admiring circle of ladies that the first confession he ever heard was one of murder, and how his remarks were interrupted by the entry of a prince who at once proceeded to remind his old friend, the cardinal, "I was your first penitent." This was an accidental identification, but one not without its lessons. Professional secrecy requires to be apparent as well as real. The doctor and the lawyer must cultivate reticence for its own sake. The doctor who, in ordinary conversation, "recalls a case," sometimes runs the danger of identification which befell the good cardinal.

It has been ungraciously suggested that the doctor's wife may sometimes impair that absolute inviolability with which professional secrecy must be maintained. This is undoubtedly an imputation as undeserved as it is unjust. Doctors' wives do not divulge secrets, and as a rule it is believed seldom participate in them.

EDITORIAL BREVITIES.

THE LOCAL MEDICAL SOCIETIES.

THE medical societies of Detroit have just been holding their anniversaries. These have been the occasion of a display of good fellowship and fraternal feeling which must have filled all who participated in them with satisfaction and gratitude. These annual meetings were celebrated with a varying degree of hilarity, one being so full of music that it might have been taken for the anniversary of a glee club. The interested participants in these gatherings must find place for one or two reflections. Why, when such good feeling is manifested should these various societies refrain from uniting to fulfill their common intention—the promotion of professional interest, and if so many festivities are to be held, why should they be held in the same week? One reflection perplexes his brain and the other his stomach.

THE OPENING OF THE MEDICAL SCHOOLS.

IT is the time of the year when the medical student is copiously plied with advice as to how he should conduct himself in order to excel in his profession. The value of the excellent precepts at this time formulated, is not to be measured by the constancy with which they will be followed. One of the greatest needs of the successful practitioner is good health. No man can stand the fatigue of practice unless he possesses this. If the practitioner is successful he will have to work twelve hours a day and a good part of the night. The glories of the healing art have been wisely commented upon during the past month. Of one conspicuous glory, however, enough has not been made. It is one of the greatest of the glories and noble traditions of the profession that many have to give their services without hope of fee or financial reward. This is one of the glories that is not on the wane. It is said that there are 800 physicians in the city of Detroit. We can give the novitiates at the shrine of AESCULAPIUS no better greeting than that of ABERNETHY, "God help you all."

THE LATE DOCTOR ALBERT CAMPAU.

IN the death of DOCTOR ALBERT CAMPAU, which recently occurred in the retreat at Dearborn, a life was ended from which at one time much was promised. DOCTOR CAMPAU was the son of the late BARNABAS CAMPAU and MRS. RICHARD

Storrs Willis. Notwithstanding alluring prospects in other directions, young **Campau** was impelled to select the arduous career of a physician. He studied under **Doctor E. L. Shurly**, of this city, and graduated from the Detroit Medical College in 1882. He at once went into active practice in Detroit, became director of the clinic at Saint Mary's Hospital, and engaged himself in hospital work. **Doctor Campau's** connection with Saint Mary's Hospital will be long remembered. His kind and gentle manners endeared him to the poor and suffering. He continued to practice medicine until 1885, when symptoms first manifested themselves of the malady, which subsequently blighted his brilliant and promising career. All that a mother's devotion could suggest was done to secure his restoration to health, and the best advice in the country proving futile he was taken abroad. In Paris he consulted the late **Professor Charcot**, and subsequently fell into the hands of **Doctor Briand**, a distinguished specialist, who has charge of the large and important asylum of Villejuif, a few miles from Paris. **Doctor Campau** had the gift of attracting all who associated with him, and **Briand** maintained an affection for his patient and interest in his case until the end. The French specialists, however, recognized the inevitably fatal character of the malady, and the past ten years have witnessed the fulfillment of their predictions in the gradual destruction of their patient's mind and body. The late years of **Doctor Campau's** life were spent in the retreat at Dearborn. His faculty of endearing himself to those associated with him was retained to the last, and the sisters in charge of the retreat comment on his gentle and courtly disposition, and on the deep religious spirit he displayed. The remains of **Doctor Campau** were interred beside those of his father and brother in Elmwood cemetery.

MEDICAL NEWS.

THE DETROIT MEDICAL AND LIBRARY ASSOCIATION.

The annual meeting of this association was held on Monday, October 8, under the presidency of Doctor Eugene Smith. The work of the year has been eminently satisfactory and the treasurer made a report from which no "hard times" could detract from the glory thereof. The retiring president not only delivered an oration stimulating to the mental appetite, and gleaming with sallies of wit and wisdom, but also entertained the members in a sumptuous and pleasant manner. The future of the association for the forthcoming year, will rest with the following able officers: President, Doctor E. T. Tappey; vice-president, Doctor Charles W. Hitchcock; treasurer, Doctor A. P. Biddle; secretary, Doctor Willis S. Anderson.

THE DETROIT ACADEMY OF MEDICINE.

The annual meeting of this time-honored body was held in the Prismatic Hall, on Tuesday, October 9, under the presidency of Doctor A. H. Bigg. The election of officers for the ensuing year was held. Doctor Bigg read a scholarly and interesting address on modern therapeutics, and subsequently entertained the members and invited guests at a collation, so terminating in a pleasant and friendly manner, a year of the society's life especially notable for industry and excellence in its scientific work. The regular election of officers occurred and the following gentlemen were chosen to manage affairs for the ensuing year:

President, Doctor W. R. Chittick; vice-president, Doctor D. LaFerté; secretary, Doctor Chas. W. Hitchcock; treasurer, Doctor P. M. Hickey; director—for three years—Doctor J. E. Emerson.

THE DETROIT GYNECOLOGICAL SOCIETY.

THE annual meeting of this society was held at the Detroit Club, on Wednesday, October 3. The record of the year's work was in every sense satisfactory. The officers elected to serve during the ensuing year were: President, Doctor N. W. Webber; vice-president, Doctor Florence Huson; secretary and treasurer, Doctor R. A. Newman. A banquet given by Doctor E. T. Tappey, the retiring president, followed the business meeting, and was largely attended. The responses to the various toasts were brimful of sentiment, and the attention and consideration with which the speeches were received was a striking testimony to their intellectual character. Let us hope the Detroit Gynecological Society may have many such successful meetings.

THE WAYNE COUNTY (DETROIT) MEDICAL SOCIETY.

THIS organization was delightfully entertained on the evening of the 8th instant at the residence of Doctor E. B. Smith, the reëlected president. About two hundred physicians and others enjoyed the festivities of the occasion. Luncheon was served after the reception, and this was followed by the merry tripping of the light fantastic toe. The officers of this society for the ensuing year are: President, Doctor E. B. Smith; vice-president, Doctor W. R. Henderson; secretary, Doctor Frank S. Hough; treasurer, Doctor C. Henri Leonard. Trustees: Doctors, W. J. Brand, Kenneth Gunsolus, Lewis E. Maire, T. J. Parker, O. P. Eaton.

AN ACTION FOR DAMAGES.

SUIT has been instituted against DOCTOR A. C. BERNAYS, of Saint Louis, for publishing the portrait of a patient in connection with the report of a case. The plaintiff claims $15,000 damages. Permission was granted to photograph the child, but the mother denies any intimation that the picture was desired for publication. The doctor operated for stricture of the esophagus, and the photo-engraving, which accompanied the report, represented the little girl nude above the waist. The article was first published in a medical journal and afterward thirty thousand reprints were distributed.

THE RETIREMENT OF AN ARMY OFFICER.

DOCTOR JOHN S. BILLINGS, Director of the Army Medical Museum, severed his connection with the army on October 1, ranking as Lieutenant Colonel and Deputy Surgeon General. The doctor was born in Indiana in 1837. He received degrees at Miami University, Medical College of Ohio, Edinburgh, Harvard, Munich and Oxford. Prior to entering the army, he had been resident physician at Saint John's Hospital and the Commercial Hospital of Cincinnati, and demonstrator of anatomy at the Medical College of Ohio. In September, 1861, he was appointed Acting Assistant Surgeon, and received the brevet rank of Lieutenant Colonel during the progress of the war, an honor that was confirmed by promotion in 1894. He was on duty in the hospitals at David's and Bedloe's Islands, New York, during parts of 1863 and 1864, being ordered to Washington in the latter year to assume charge of the army hospitals at Cliffbourne

Barracks, Georgetown. During the thirty-four years that he has been in the service his record has not suffered reproach. The organization of the library of the Surgeon General's office, the largest and most valuable collection of medical books in this country, has been completed under his supervision. In 1883 he was appointed curator of the Army Medical Museum. He is the author of the "National Medical Dictionary," "Reports on Vital Statistics," et cetera. As announced in a previous issue, **DOCTOR BILLINGS** will assume the Chair of Hygiene and the Directorship of the Laboratory of Hygiene in the University of Pennsylvania.

THE RETIREMENT OF A NAVY OFFICER.

DOCTOR ALBERT LEARY GIHON, Medical Director of the United States Navy, was retired on September 5, in compliance with the law fixing the age limit, his sixty-second birthday having been attained. He entered the navy in 1855, and retired with the rank of Commodore (Brigadier General), after a service of more than forty years, eleven of which were spent on water and over twenty-seven on land. The doctor received his medical degree from the Philadelphia College of Medicine and Surgery in 1852, and filled the position of Professor of Chemistry and Toxicology in that institution in 1853–54. Making his *début* in the navy as Assistant Surgeon, he successively became Passed Assistant Surgeon in 1860; Surgeon in 1861; Medical Inspector in 1872; and Medical Director in 1879.

THE JENNER CENTENARY IN RUSSIA.

THE National Health Society of Russia has organized an exhibition of objects pertaining to vaccination for the purpose of commemorating the one hundredth anniversary of Jenner, which occurs on May 14, 1896. The announcement that valuable prizes would be awarded for the best works on the subject of vaccination has prompted the collection of materials for histories of this great prophylactic measure as practiced in Russia and Western Europe, and their publication will be speedily undertaken. The writings of Jenner will be translated and printed in the Russian. The benefactor's biography, accompanied by a portrait, will also be issued in this language. The competitions mentioned will be closed in March, 1896. The centennial day will be characterized by a commemorative meeting.

THE PASSING OF PASTEUR.

M. **LOUIS PASTEUR** died at Paris, September 27, aged seventy-three years. The great scientist was born at Dôle, in the Jura region, on September 27, 1822, his father being a poor journeyman tanner. The early education of Louis was superintended by his parents, but his classical studies were pursued at Arbois, and later he received the degree of Bachelor of Letters at Besançon. In 1845 he went to Paris and devoted two years to the study of chemistry at the École Normale, and was appointed a Doctor in 1847. A year afterward he was chosen a professor of Physics in the College of Dijon, and three months later was called to a Professorship of Physics in the Faculty of Sciences at the University of Strasburg. In 1854 he perfected the organization of the newly formed Faculty of Sciences at Lille, and in 1857 returned to Paris to assume the direction of the scientific studies at the École Normale. In 1865 he was appointed a Professor of Geology, Physics, and Chemistry at the École des Beaux Arts, and in 1867, Professor of Chemistry at the Sorbonne, which position he held until 1875, inaugurating in the meantime (1870) his studies in inoculation which have since made him famous throughout the civilized world. In 1862 he was elected to membership in the Academy of Sciences, and six years later he received the title of Doctor from the Faculty of Medicine at Bonn, but his patriotism caused a return of the diploma on account of the Franco-Prussian war. In 1869 he was elected a foreign member of the Royal Society of London, and in 1881 a member of the French Academy. The title of Doctor was conferred on him by the University of Oxford, and he received almost every distinction within the power of the French government. By an unpromulgated decree of Napoleon III, he was made a Senator, and the Legion of Honor elected him to membership in 1885, in which body he achieved the highest rank. The Academy of Sciences unanimously elected him perpetual secretary to succeed Vulpian, who died in 1887, but ill health and overwork compelled him to resign this position at the end of two years, and he was made an honorary perpetual secretary. Pasteur was a chemist, but his discoveries have revolutionized the practice of medicine and surgery. The principal achievements of his life work may be summed up as: an investigation into the morphology of bodies having a crystalline structure; studies in fermentation; discovery of the silkworm parasite; discovery of the parasite of chicken cholera, and a means for eradicating the disease; and the discovery of a treatment for hydrophobia.

A GRAVE CASE.

Doctor Henry Case, of San Jose, California, was recently indicted for manslaughter, the specific accusation being that of causing the death of a patient by mercurial poisoning. Six grains of the bichoride of mercury were found in the viscera of the deceased, but at the trial the prosecution broke down, in its expert testimony, on the relation between the death of the patient and the amount of the mercury in the tissues, and hence the defendant was acquitted. It had been the frequent practice of the doctor to dispense medicine from a pocket-case, and this course obtained during attendance upon the ill-fated man. The bottles were not labelled, but their contents was indicated on the leather straps holding them in place. The dosage of solids was approximated, the blade of a pocket-knife being brought into requisition in lieu of a scale. The analytical expert found bichloride of mercury in several of the vials and morphine in the Dover's powder. Tablets that were marked morphine did not contain a trace of the drug. The doctor has not been in good standing with the profession of San Jose.

SCHOOL HYGIENE.

The New York State Board of Health have requested the Board of Education to enforce the following rules in the schools of that state: (1) The use of slates, slate pencils and sponges shall be discontinued in all the public schools. (2) According to requirement pupils shall be supplied with pencils and pen-holders, each pupil to retain those received in a box provided for the purpose, such box to be marked with the pupil's name. Pencils and pen-holders shall not be transferred from one pupil to another without suitable disinfection. (3) All school property left in the school building by a child sick with any contagious disease, and all such property found in an apartment occupied by a family in which a case of small-pox, typhus fever, diphtheria, scarlet fever, or measles has occurred, shall be taken by the health department for disinfection or destruction.

(4) Books which are taken home by pupils shall be covered regularly once each month with brown manilla paper. (5) Places for drinking water on the ground floors of the school buildings shall be discontinued, and a covered pitcher provided for each class room, in which fresh water shall be placed before every session. A numbered cup, to be kept in the class room, shall be issued to each pupil. No interchange of cups shall be allowed.

MINOR INTELLIGENCE.

TEETH are extracted by electricity in London.

THE Rush monument fund now amounts to $3,357.39.

THE legislatures of North and South Dakota have established blind asylums.

THE Syracuse (New York) University will have a new building for its medical department.

THE business manager of the Amick Chemical Company recently died of consumption in New Mexico.

THE Chicago Summer School of Medicine has been incorporated under the title of the Illinois Medical College.

THE name "Smith" is the popular monosyllabic appellation of 1284 practicing physicians in the United States.

DOCTOR FRANCESCO VALLARDI, editor of *The Gazzetta Degli Ospedali e delle Cliniche*, died at Milan, on September 18.

THE will of the late Henry M. Cram bequeathed $5,000 to the New York Post-Graduate Medical School and Hospital.

DOCTOR ALBERT NAGEL, aged sixty-two years, recently died. He was professor of Ophthalmology in the University of Tübingen.

SECRETARY MORTON is authority for the statement that nearly 10,000 horses are slaughtered yearly in Germany for food purposes.

A BUILDING designed for work in pathology, and to cost $22,000, will be erected as an adjunct to the Massachusetts General Hospital.

IT is proposed in Utah to reform criminals by hypnotic influence. In Germany sexual perverts are to be cured by the same process.

PROFESSOR GUYON and Professor Lannelongue have been elected, respectively, president and vice-president of the French Academy of Surgery.

DOCTOR PEMBERTON DUDLEY has been elected president of the Pennsylvania State Board of Health to succeed Doctor S. T. Davis, of Lancaster.

DOCTOR J. COLLINS WARREN recently had the honorary degree of LL. D. conferred upon him by the Jefferson Medical College of Philadelphia.

WOMEN are now eligible to medical instruction at the University of Durham, a supplementary charter having been procured enabling this institution to grant women any degrees except those of divinity.

A WRITER for a religious weekly has just discovered that there is a bicycle face. This will not startle the profession, however, as it has long known that a considerable supply of cheek is necessary to prompt the donning of bloomers.

Professor Baillon, occupant of the chair of Botany in the Faculty of Medicine, suddenly died in Paris a short time ago, aged sixty-eight years.

Jane Cakebread, of London, has been convicted of drunkenness 288 times. The proposition that she spend one year in a home for inebriates was scoffed at by the victim.

A new profession has recently sprung into existence. It has to do with the toilet, and its followers are designated gray hair pullers. They are destined to have a great pull.

Doctor Nelson Isham died on September 18, at Little Falls, New York. He was at that time the oldest living alumnus of Yale Medical School, having graduated in 1828.

Doctor J. A. Kimmel, of Hancock county, Ohio, has been nominated for the legislature. The doctor is secretary of the Committee on Legislation of the Ohio State Medical Society.

The women dentists of the United States have organized a dental association. It has forty-two members. There are about one hundred and fifty women dentists in this country.

The Central Pacific Railway Company founded the first railroad hospital in the United States. It was established at Sacramento in 1868, and placed in charge of Doctor S. P. Thomas.

The new central building to be erected in San Francisco for the accommodation of the affiliated colleges of the University of California will grace the vicinity of the entrance to the Golden Gate Park.

The Frederick Douglass Memorial Hospital and Training School for Nurses was recently opened in Philadelphia. It is designed exclusively for colored patients, and has capacity for about fifty beds.

Doctor Adolph von Bardeleben, a well-known surgeon, died in Berlin on September 24. His birth occurred at Frankfort-on-Main, on March 1, 1819, and at the time of his death he was professor in the University of Berlin.

A Mission Medical College, with a dual faculty, has been organized in Chicago. One section of the teaching corps will dispense medicine and the other theology. Its purpose is to prepare physicians for missionary work.

The municipality of Paris has established a laboratory for bacteriology in the old Lobau barracks, where examinations of membrane in suspected cases of diphtheria are made within twenty-four hours after the material is supplied.

The first anatomical theatre was erected in 1549. Labrizio built it in Aquapend, Padua, at his own expense, and we are told that in order to properly pursue the dissections it was necessary to employ torches as artificial light, owing to the height and darkness of the building.

Doctor John Syer Bristowe, author of "Bristowe's Practice," died in London on August 20, aged sixty-eight years. He was senior physician to Saint Thomas' Hospital, London, and wrote the articles on Pyemia and Diseases of the Intestines which appear in "Reynold's System of Medicine."

A CONTINGENT fund of $50,000 has been appropriated by the legislature of Wisconsin for expenditure by the State Board of Health in preventing the introduction of cholera, should the necessity become apparent, within the ensuing two years.

DOCTOR J. M. WHITE, of Shuqualak, Mississippi, has invented an obstetric forceps with narrowing and adjustable blades. Its use is indicated in cases demanding immediate delivery, the os uteri being too small to admit of the ordinary blade.

IT is now suggested that the name of Doctor Daniel Drake be perpetuated by the erection of a monument in Cincinnati; or, that the new medical department to be established by the University of Cincinnati, be designated the Drake Medical College.

PROFESSOR WM. H. PORTER, of the New York Post-Graduate Medical School, pronounces the much-vaunted nuclein a total failure. He says there is no evidence in its favor except the bold assertions of its advocates.—*The Maryland Medical Journal.*

AT the recent medico-legal congress in New York an attorney read a paper advocating euthanasia in cases of painful incurable diseases. In the discussion which followed every physician condemned the inhuman procedure, but many legal lights endorsed it.

SIR JOSEPH LISTER was made the recipient of a three-quarters length portrait of himself on the occasion of his retirement from King's College, London, July 31. It was accompanied by an illuminated and illustrated album which reflected the names of the donors.

DOCTOR G. W. FRAKER, of Richmond, Missouri, who conspired to defraud insurance companies by jumping into the river some months ago, was recently found living in the woods of Northern Wisconsin. The escapade was reported in this journal at the time of its occurrence.

As a memorial of the late Sir Andrew Clarke, the London Hospital is to be enlarged by a female erysipelas ward, rooms for cases needing isolation, and additional rooms for the porters. About $22,000 will be required to complete the work, $15,000 of which has already been collected.

DOCTOR C. SCHIMMELBUSH, of Berlin, author of a work entitled "A Guide to the Aseptic Treatment of Wounds," which is reviewed in another part of this issue, died on August 2, aged thirty-five years. He was assistant to Professor von Bergmann, and was regarded a rising German surgeon.

THE fund for the revival of *The Index Medicus* is increasing gradually. The subscription roll will remain open until December 1, and it is earnestly hoped that the required amount—$5,000—may be obtained. If the periodical is resuscitated it will exclude advertisements and exchanges.

THE Portland (Oregon) Methodist Hospital has been reorganized with a homeopathic staff. Here is the reason given for the change: "Homeopathy had no hospital in the city, nor indeed in the Pacific Northwest. Well-nigh one-third of the city is homeopathic in their family practice, and this is particularly true of the wealthy and enlightened portion of the residents."

DOCTOR RICHARD DEY, of Romulus, New York, recently suffered concussion of the brain at the hands of a lunatic into whose sanity he was enquiring. The interrogatory impulses collected in the cerebrum of the lunatic until the irritation provoked a discharge of such violent import as to cause him to seize a stone and strike the doctor prostrate.

THE Red Cross Society of Venezuela has honored Surgeon-General James R. Tryon, of the United States navy, by electing him to membership. The bronze medal of that society has also been awarded him in recognition of services rendered the wounded at La Guayra during the revolution of 1892, when the doctor was attached to the flagship Chicago.

IT is proposed to establish a memorial to the late Professor Huxley. It will probably take the form of an annual lecture and science scholarship and medal, at the Charing Cross Hospital Medical School. It has been suggested that the project be made international and the British committee, which will convene in October, is expected to approve of the extension.

THE Continental Anglo-American Medical Society convened in annual session at London on August 2, under the presidency of Sir Richard Quain. The society has a membership of ninety-six, five new members having been elected at this meeting. After the literary exercises a luncheon was served, and Mr. Ernest Hart, Sir Richard Quain, and others indulged in post-prandial speeches.

THE Pennsylvania State Board of Health have adopted the following time of quarantine for persons who have been exposed to infectious diseases: diphtheria, twelve days; small-pox, eighteen; measles, eighteen; chicken-pox, eighteen; mumps, twenty-four; whooping-cough, twenty-one. This rule applies to children who have been subjected to measures for disinfection. Adults are liberated at once under like conditions.

A GROOVE IN A HOLE!—A newspaper item recounts the sad case of a Staten Island dentist who broke a tooth that he was extracting, and was struck in the eye by a fragment of it. "It was discovered," says the article, "that a groove had been made in the pupil of the eye by the flying particle of the tooth." It is added that the doctor in attendance has "but few hopes" of saving the sight of the injured eye.—*The Sanitarian.*

THE dedication of the Silver Cross Hospital occurred at Joliet, Illinois, on the 6th instant. The hospital is 150 feet long by 50 feet wide, four stories high, constructed of stone, and its building and equipping has been in accordance with the latest sanitary and scientific advances. The fund from which this charitable institution derived its inception was accumulated by the "Watchers," a society of ten little girls who made paper flowers and sold them.

DOCTOR MARY WALKER has a scheme for colonizing the bloomer girls. She has purchased a farm of 135 acres, about seven miles west of New York, and proposes establishing a colony for women who bind themselves to celibacy and foreswear the crinoline. All females of good moral character, between fifteen and thirty-five years of age, are eligible to the settlement on condition that they help plant and harvest the crops. Plans for a commodious farm-house have been prepared, and Mary promises to name the colony toward the close of the year.

DOCTOR FRANK B. GARDNER, a well-known physician of Baltimore, unmarried, and forty-seven years of age, died in that city on September 7, from the effects of the accidental inhalation of carbon monoxide. It is thought that in adjusting the mosquito net in his sleeping room he pulled upon the stopcock and turned on the gas.

THE New England Cremation Society is authority for the statement that seventeen crematories have been established in the United States during the past ten years. The number of bodies incinerated during each year of that period is as follows: In 1885, 36; in 1886, 119; in 1887, 125; in 1888, 199; in 1889, 262; in 1890, 362; in 1891, 464; in 1892, 576; in 1893, 677; in 1894, 876. These figures would seem to indicate that cremation is growing in favor.

A BATH house is projected for Mount Clemens, the tubs and pipes of which are to be constructed of glass. Heretofore the tubs at this place have been of wood, and in order to prevent leaking, caused by the action of the gases in the mineral water, frequent painting has been necessary, hence the idea of glass tubs. It requires considerable sand to embark in an enterprise of this kind; still, it is estimated that the expenditure of $15,000 will prevent the bottoms falling out of the tubs.

A PHYSICIAN employed by the New York worker's union makes the statement that his visits net him about one cent each. An enterprising merchant in Belgium issues coupons to his customers, who make purchases of twenty cents or upward, which entitle them to the services of a physician. A tea merchant in the English metropolis supplies medical service to the purchaser of every pound of tea. Is medicine a profession or a trade? or, is it merely a "premium" designed to enliven trade?

AFTER July, 1897, the New Mexico Board of Health will require an examination of applicants to practice medicine in that territory who shall have received their diploma from medical colleges not requiring preliminary examination of its matriculants or equivalent evidence of satisfactory general education, and for graduation evidence of four years' study of medicine during four terms of lectures in three separate years. The standard at present in vogue will be maintained in the meantime.

PROFESSOR ROSENTHAL, of Upsala, has published a description of a new anesthetizing and paralyzing drug, in *The British Medical Journal*, which can be utilized as a substitute for curare in the physiological laboratory. Septentrionalin is the name given to this substance. It is obtained from the aconite of the North, and is a white or slightly yellowish powder, of a bitter taste, soluble in alcohol, ether, and slightly in water. Now let some one offer a desirable substitute for the much-abused physiological frog.

THE Weber–Parkes prize was founded by Doctor Hermann Weber in memory of the late Doctor E. A. Parkes. Its value is about $750, and the award will be made triennially, the first occurring in 1897. It was created to encourage the investigation of tuberculosis, and the writer who produces the best essay on "The Means—Prophylactic or Curative—Deemed by the Author to have Value in the Control of Tuberculosis, Especial Regard being had to their Application to Human Tuberculosis," will be entitled to the first prize.

THE American Orthopedic Association, recently in session at Chicago, elected the following officers for the ensuing year: President, Doctor Royal Whitman, of New York; first vice-president, Doctor George W. Ryan, of Cincinnati; second vice-president, Doctor Joel E. Goldthwait, of Boston; secretary, Doctor John Ridlon, of Chicago; treasurer, Doctor E. G. Brackett, of Boston. The next meeting will be held at Buffalo, in the third week in May, 1896.

A DECREE has been promulgated at the State Normal School that vertical penmanship must henceforth be taught in that institution. The order caused consternation among the teachers, as few are accustomed to that system of chirography. The change is being made in other schools throughout the state, and recently came in vogue at the seat of the University of Michigan. Some time ago The Physician and Surgeon pointed out the errors of the slanting method and it is with pleasure that we note the gradual adoption of the physiological form.

SURGEON-GENERAL SIR THOMAS LONGMORE, C. B., of England, honorary physician to the queen, and for a long time professor of Military Surgery in the Army Medical School at Netley, suddenly died at Swanage on October 1. He served with distinction throughout the Crimean Campaign and in Bengal during the Indian Mutiny, and was the author of a work on "Gunshot Injuries," a "Treatise on the Transport of Sick and Wounded Troops," and an "Optical Manual." His personal qualities and scientific attainments made him a distinct loss to the service and his friends.

THE British Association for the Advancement of Science assembled in sixty-fifth annual meeting at Ipswich on September 11, 12 and 13, under the presidency of Sir Douglas Galton, who, while delivering the annual address, fainted, and although recovery soon followed, he was unable to continue, and the address was finished by a member. "Pasteur, the Chemist, Physicist, and Biologist," was eulogized by Doctor Percy Frankland. The meeting of 1896 will be held in Liverpool under the presidency of Sir Joseph Lister, and Toronto will be the place of meeting in 1897.

DOCTOR JOHN BROWN, health officer of Bacup, England, in a report lately rendered, cites an instance where an outbreak of typhoid fever in a rural district was directly traceable to the agency of infected milk from the dairy of a farmer who pursued the vocation of scavenger of night soil. He had been known to remove the excreta of a typhoid fever patient in the vicinity of the epidemic a short time prior to its occurrence. And thus the bacillus typhosus has afforded a practical demonstration of the possibilities attending this new route from the privy vault to Pyer's patches.

THE American Public Health Association held its twenty-third annual meeting in Denver, on October 1–4. This sanitary body, which is composed of members from the United States, the Dominion of Canada, and the Republic of Mexico, elected the following officers for the ensuing year: President, Doctor William Bailey, of Louisville; first vice-president, Doctor Granville P. Conn, of Concord; second vice-president, Doctor Gregorio Mendizabal, of Oriziba, Vera Cruz, Mexico; secretary, Doctor Irving A. Watson, of Concord, New Hampshire; treasurer, Doctor Henry D. Holton, of Brattleboro, Vermont.

THE Missouri Valley Medical Society began its annual meeting in Council Bluffs, Iowa, on September 19, and after holding sessions two days indulged in an excursion to Hot Springs, South Dakota, where the third day's session was held. Officers for the ensuing year were elected as follows: President, Doctor F. S. Thomas, of Council Bluffs; first vice-president, Doctor F. W. Porterfield, of Atlantic; second vice-president, Doctor Rebecca Hanna, of Red Oak; secretary, Doctor Donald Macrae, of Council Bluffs; treasurer, Doctor T. B. Lacey, of Council Bluffs. The next meeting will convene at Atlantic, Iowa, in March, 1896.

A LEGISLATIVE enactment, which became effective on August 30, ordains greater precaution in the shipment of persons dead from dangerous communicable diseases. The maladies included in this category are consumption, pneumonia, influenza, diphtheria, typhoid fever, scarlet fever, whooping-cough, measles, and small-pox, and the law prescribes that transportation companies must not receive the bodies of victims of these diseases for shipment unaccompanied by a permit from the health officer or board of health of the place whence the remains are destined, as well as from the board of health where the death occurred.

ENGLAND has five universities and four colleges in which medicine is taught. They are, respectively: Oxford, Cambridge, London, Victoria, Durham, Royal College of Physicians, Royal College of Surgeons, Society of Apothecaries, Conjoint Examining Board. Ireland has two universities and four colleges: Dublin, Royal, Conjoint Examining Board, Royal College of Physicians, Royal College of Surgeons, Apothecaries' Hall. Scotland has four universities and four colleges: Edinburgh, Glasgow, Aberdeen, Saint Andrews, Conjoint Examination, Royal College of Physicians, Royal College of Surgeons, Faculty of Physicians and Surgeons.

DOCTOR HUGHLINGS JACKSON, who has been connected with the London Hospital for more than thirty years, was recently made the recipient of a handsome testimonial in the form of his portrait in oils, and a piece of silver plate in the form of an antique silver ewer. The gift was from his colleagues on the staff and other friends, and the pleasant function of presenting it devolved upon Sir James Paget. The donors testified in an inscription that it was presented "in recognition of their esteem and admiration of his great services to the London Hospital and Medical College, his distinguished position in the profession, and of the advances he has effected in medical science by his laborious investigations and profound insight into diseases of the nervous system."

THE curved knife-needle for discission of the capsule after cataract extraction is a new instrument introduced by Doctor John E. Weeks, of New York. The knife is "made in sets of three, each set containing a knife having a cutting edge of 3.5 millimeters, 4 millimeters, and 5 millimeters. The blade is about two-thirds of a millimeter wide in its widest part." The inventor claims that this curved knife-needle possesses the following advantages over the straight knife-needle: "(1) The incision through the capsule can be made with more ease and certainty. (2) The traction on the ciliary processes, through the medium of the capsule, is less. (3) It can be manipulated more easily when the blade is in the anterior chamber. (4) The point of the knife need not enter so deeply into the vitreous humor."

The English House of Lords will have to deal with a petition praying that two convictions for drunkenness within two years shall be sufficient to brand the accused as an habitual drunkard, and that any dealer serving or harboring him, after due notice, shall be liable to penalties and forfeiture of license.

Enteric fever has been causing havoc among the young English army officers in India. A number of deaths have occurred in the garrison quartered at Bangalore, and the source of the disease has been traced to the drinking water. It seems that the "water for the cantonment is derived from a tank supplied by an open channel which passes through a native bazaar, kept clean by sweepers. Forming part of the wall of the supply channel is the main sewer from the same area. The sewer is so ingeniously arranged that when overcharged with storm water relief is obtained by discharge into the water-supply channel, and thus into the tank."

An organization has been formed to inaugurate post-graduate teaching at Bellevue Hospital. It contemplates imparting clinical instruction to graduates and third-year students, and began operations on October 1. The intention is to give five courses of six weeks each during the year. The medical staff consists of Doctors C. L. Dana, George B. Fowler, and Alexander Lambert. The surgical staff consists of Doctors J. W. S. Gouley, Charles Phelps, and W. F. Fluhrer. The gynecologist is Doctor W. Gill Wylie. The organization has been effected by the members of the Fourth Division of the Bellevue Hospital, the medical staff of that institution consisting of four divisions.

The methods of the "vitapath" seem to have recently provoked the displeasure of the authorities in Cincinnati to a degree that entailed prosecution. The specific offence was practicing without a license, and, when pronouncing the sentence of imposing a fine upon the prisoner, Judge Dustin said: "Men who knowingly go into a sick room and prevent anything being done for a dying man by silly incantations and laying on of hands are responsible for his death and ought to be on a par with a murderer in the eyes of the law. God help the dying man who relies upon you or any of the so-called graduates of quackery. You speak of vitapathy being of a higher power than medicine, and you say you ordain ministers at the same time you matriculate vitapathic physicians. Your methods are an insult to intelligence, their practice is a criminal abuse of ignorance, and your college a disgrace to civilization."

The American Association of Obstetricians and Gynecologists convened in annual meeting at Chicago, on Tuesday, September 24, under the presidency of Doctor J. H. Carstens, of Detroit. About one hundred and twenty-five members were present, and the sessions were marked by interest, investigation, and instruction. The address of welcome was delivered by Doctor William E. Quine. Doctor John B. Murphy entertained the members at supper on board the steamer, Soo City, and gave them a delightful sail on Lake Michigan. The following gentlemen were elected officers for the ensuing year: President, Doctor Joseph Price, of Philadelphia; first vice-president, Doctor A. H. Cordier, of Kansas City; second vice-president, Doctor George S. Peck, of Youngstown Ohio; secretary, Doctor W. W. Potter, of Buffalo; treasurer, Doctor X. O Werder, of Pittsburgh. The next meeting will be held in Richmond, Virginia, on the second Tuesday in September, 1896.

DOCTORS RICHARD DEWEY, Sanger Brown and Archibald Church were recently appointed an advisory medical staff to the Cook county (Chicago) institution for the insane at Dunning. The first and last named gentlemen peremptorily declined to serve because of existing conditions which require a lay superintendent, who has control of the resident staff, to carry out the regulations of the advisory staff, subject to the will of the president of the county board, a man totally unqualified to manage a hospital for the insane. Doctor Brown asked the commissioners to modify these conditions or he could not accept. Notwithstanding that Cook county is the richest circumscribed domain west of New York, the new staff will be expected to serve without compensation. Its legal advice will probably be paid for, however.

THE autosterilizing thermometer case is a new invention which affords a cinch on all germs that are prone to render the thermometer infectious. The following is a description of the *modus operandi* of the device: "The thermometer rests in a receptacle like the hard-rubber cases usually sold with thermometers, except that at the lower end of the case is attached an extra hard-rubber chamber one-half inch in depth, which contains a small pledget of absorbent cotton soaked with glyceraldehyde. The fluid being very volatile, the vapor rises to the interior of the case proper through openings provided in the bottom of the case, and keeps the thermometer sterilized without other attention than recharging once a week with a few drops of glyceraldehyde. Glyceraldehyde is composed of several germicidal properties, the base of which is formaldehyde."

THE following notice has been issued by His Excellency Governor John T. Rich: "In accordance with the provisions of Section 9, Act Number 209, Public Acts of Michigan of 1893, I hereby give notice that the Home for the Feeble Minded at Lapeer is ready for the admission of inmates. Owing to the limited amount of room in the institution, which will accommodate only a portion of the applicants, only those under twenty-one years of age, who are susceptible to some improvement, and those over twenty-one years of age who are capable of performing physical labor will be given preference in admission. At present there are no accommodations for epileptics, and the admission to the institution, until a further provision is made, must be substantially confined to the classes above described. All communications should be directed to Doctor W. A. Polglase, superintendent of the institution, Lapeer, Michigan."

DOCTOR FRANK VAN FLEET, a member of the New York County Medical Society, has been sued for $40,000 by a vender of eye-glasses. In an essay read before the organization mentioned, the doctor questioned the propriety of allowing a lay firm to further advertise in the "Medical Directory" of the society, as their practices were decidedly irregular, inasmuch as the announcement claimed "superior methods for the detection, treatment, et cetera, of ocular defects." A representative of the daily press was present at this meeting, and succeeded in reporting the doctor's grievance sufficiently correctly to prompt indictment. It is submitted by the author that the paper was in the nature of a privileged communication, that the society unanimously supported his conclusions, and therefore should come to his rescue when prosecuted by a body of sagacious quacks. A committee has been appointed to consider the responsibility of the society for the individual opinions of members expressed in meeting assembled.

The Medico-Legal Congress which convened in New York City on September 4, under the auspices of the New York Medico-Legal Society, Doctor H. W. Mitchell in the chair, is said to have been the largest and most successful assembly ever held for the public consideration of medical jurisprudence. The sessions continued three days, and fifty-eight papers were read and discussed by physicians, lawyers, and judges. The following were elected officers: President, Clark Bell; medical vice-presidents, T. D. Crothers, R. Ogden Doremus, Paul Gibier, W. B. Outten, Irving C. Rosse, Forbes Winslow, H. Louise Thomas and Frank H. Caldwell; secretaries, Moritz Ellinger, F. B. Downs, Albert Bach, Clarence A. Leighton and Charles A. Doremus; treasurer, George Chaffee.

At the recent meeting of the Canadian Medical Association the following were elected officers for the ensuing year: President, Doctor James Thornburn, of Toronto; vice-presidents, (for Prince Edward Island) Doctor James Warburton, of Charlottetown, (for Nova Scotia) Doctor William Tobin, of Halifax, (for New Brunswick) Doctor W. W. White, of Saint John, (for Quebec) the Honorable D. Marcil, of Quebec, (for Ontario) Doctor Fife Fowler, of Kingston, (for Manitoba) Doctor H. H. Chown, of Winnipeg, (for the Northwest Territory) Doctor G. Brett, of Banff, (for British Columbia) Doctor R. E. McKechnie, of Nanaimo; general secretary, Doctor F. N. G. Starr, of Toronto; local secretaries, Doctor H. D. Johnson, of Charlottetown, Doctor G. C. Jones, of Halifax, Doctor W. Christie, of Saint John, Doctor J. G. McCarty, of Montreal, Doctor John H. Mathieson, of Saint Mary's, Doctor W. J. Neilson, of Winnipeg, Doctor George Macdonald, of Calgary, and Doctor W. A. Richardson, of Victoria; treasurer, Doctor H. B. Small, of Ottawa. The next meeting will be held in Montreal.

CONTEMPORARY OPINION.

RESPONSIBILITY FOR SMALL-POX.

[THE SANITARIAN.]

Detroit's whilom pretentious health service, under mere political preferment, besides concealing the prevalence of infectious diseases, appears to have involved the city in an interminable muddle with claimants for all sorts of services and damages to the aggregate amount of $41,000. Among them. the liability of the city to reimburse a person who claims to have sustained a loss by reason of being afflicted with small-pox is called in question. Against this claimant surely the city should submit an offset or counterclaim, and hold him responsible to the people for endangering their lives, no less, indeed, than if he had poisoned a well. For he had no more justification in having small-pox and jeopardizing the lives of the community by exposing them to that loathsome disease than he would have had by turning the outfall of a sewer pipe into the potable water supply. For in the same sense that preventable mortality is criminal mortality, under the purview of municipal authority is an individual who neglects vaccination a criminal. His attitude to the community amid whom he dwells is more dangerous than that of an incendiary, or of a druggist who sells deadly poisons in defiance of law, and, it scarcely seems necessary to add, no more excusable under any circumstances, for knowledge of the protective power of vaccination against small-pox is even more universal and quite as acceptable to all sensible people as knowledge of combustible houses or the effect of poisons.

RECENT PUBLICATIONS.

REVIEWS.

A SYSTEM OF SURGERY.*

THE early issuance of the second volume of "A System of Surgery" bespeaks an enterprise in the publishers that the profession will be quick to perceive. The excellence which characterized the material in the preceding volume is admirably reflected in the treatise under consideration. The scope of the work embraces minor, plastic and military surgery; diseases of the bones; orthopedic surgery; aneurism; surgery of the arteries, veins, and lymphatics; diseases and injuries of the head; surgery of the spine; and surgery of the nerves. The initial monograph is by Doctor Henry R. Wharton, who discourses upon the subject of minor surgery, giving an elaborate résumé which occupies about one hundred and twenty pages. The succeeding fifty pages are devoted to plastic surgery, which is lucidly treated by Doctor George R. Fowler. The subject of military surgery is disposed of in twenty-five pages by Doctor Forwood, Deputy Surgeon-General of the United States Army. Doctor Nicholas Senn's dissertation on diseases of the bones is an interesting exposition of this important branch of surgery. Orthopedic surgery is given one hundred pages by Doctor V. P. Gibney. The article on aneurism is by Doctor Lewis A. Stimson, who is assisted, in the domain of special aneurisms, by Doctor Percival R. Bolton. The author discusses surgery of the arteries and veins (exclusive of aneurism); and surgery of the lymphatic system is considered by Doctor Frederic Henry Gerrish. An exhaustive disquisition of three hundred pages by Doctor Roswell Park deals with diseases and injuries of the head. The surgery of the spine is thoroughly investigated by Doctor W. W. Keen; and surgery of the nerves is studied by Doctor John B. Roberts. The fact that these foremost surgeons have supplied the contributions that comprise this volume is sufficient guaranty that the several subjects have been adequately covered.

* By American Authors. Edited by Frederic S. Dennis, M. D., Professor of the Principles and Practice of Surgery in Bellevue Hospital Medical College, New York; President of the American Surgical Association, et cetera, assisted by John S. Billings, M. D., LL. D., D. C. L., Deputy Surgeon-General of the United States Army. To be completed in four imperial octavo volumes, containing about 900 pages, each with index. Profusely illustrated with figures in colors and in black. Volume II, 915 pages, 515 engravings and 10 colored plates. Price per volume: $6.00 in cloth; $7.00 in leather; $8.50 in half Morocco, gilt back and top. For sale by subscription. Full circular free to any address on application to the publishers.

A GUIDE TO THE ASEPTIC TREATMENT OF WOUNDS.*

THIS is an American translation of the second revised edition of a German manual on aseptic wound treatment. It purports to detail the aseptic methods in vogue at von Bergmann's clinic, elaborated by instruction pertaining to general aseptic procedure, and supplemented by notes and illustrations by the translator which are calculated to greatly enhance the efficiency of the work. The first chapter discourses upon the importance of aseptic wound treatment, and contrasts the unfavorable results in operations performed before the practice of Listerism with the favorable results obtained at present, showing that whereas wound repair was then supposed to depend largely upon chance, the success which now attends this process is clearly attributable to antiseptic precautions. Air and contact infection, the germs of wound infection, and the means of disinfection are subjects treated in the three succeeding chapters, the latter citing the various germicidal agents and the methods for their application. In a chapter on the operating and sick room directions are given for constructing and equipping an operating room in a hospital, and for preparing one at a private house. The entire volume is replete with information of value to physicians who have not had the opportunity for observing the aseptic practices which obtain in well-appointed modern hospitals.

* By Doctor C. Schimmelbusch, Assistant in the Royal Clinic of the University of Berlin. Preface by Professor E. von Bergmann. Translated from the second revised German edition with the express permission of the author, by Frank J. Thornbury, M. D., Lecturer on Bacteriology in the University of Buffalo, New York; Supervising Microscopist in the Bureau of Animal Industry in the United States Department of Agriculture; Late Senior Resident Physician in the Cincinnati Hospital, Cincinnati, Ohio, et cetera. Cloth; 233 pages; 43 illustrations; price $2.00. New York: G. P. Putnam's Sons.

THE CARE OF THE BABY.*

THIS is a manual for mothers and nurses. It is replete with instruction regarding the management of infancy and childhood in health and disease. The hygiene of pregnancy and the characteristics of a healthy baby are subjects discussed in the first two chapters. Particular attention is given to methods of bathing, dressing, and feeding children of different ages. The growth, toilet, clothes, sleep, exercise, training—physical, mental, and moral—of the offspring are considered in succeeding chapters, together with advice pertaining to sickness, nurses and the nursery. An appendix is devoted to prescriptions. The monograph is worthy of recommendation.

* By J. P. Crozer Griffith, M. D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Professor of Clinical Medicine in the Philadelphia Polyclinic and School for Graduates in Medicine; Physician to the Children's Hospital, to the Methodist Episcopal Hospital, and Saint Agnes' Hospital, Philadelphia; Member of the American Pediatric Society and of the Association of American Physicians. Cloth; 392 pages; illustrated. Price, $1.50. Philadelphia: W. B. Saunders, 925 Walnut street.

THE DISEASES OF PERSONALITY *

THE little book under consideration is the second edition of an authorized translation of Ribot's manual treating upon this subject, and embodies all the corrections and additions of the new fourth French edition. The diseases of personality are discussed in four chapters embracing organic disorders, emotional disorders, disorders of the intellect, and dissolution of personality. The individual is defined; the variations of the personality in the normal state are described; and double personality, the personality of double monsters, and the personality of twins are each interestingly discoursed upon. In the category of emotional disorders the depressions and exaltations of the personality are given attention. The rôle of the memory is discussed among the disorders of the intellect; and the insane constitute a theme under the caption of dissolution of personality. The author classifies the diseases of personality into three principal types: alienation, alternation, and substitution. "Personality is not a phenomenon, but an evolution; not a momentary event, but a history; not merely a present or a past, but both." We commend the work to those interested in psychological research.

*By Th. Ribot, Professor of Comparative and Experimental Psychology at the Collège de France; Editor of *The Revue Philosophique.* Authorized translation. Price: cloth, 75 cents; paper, 25 cents. One hundred and sixty-four pages. Chicago: *The Open Court* Publishing Company.

MEDICAL PROGRESS.

MEDICINE.

HEART DISEASE IN MASTURBATORS.

Bachus (*Deutsches Archiv fur klin Med.*, Bond LIV, seite 201) calls attention to an affection of the heart which he has frequently encountered in masturbators. This is characterized by pain in the cardiac region, anxiety, and frequent annoying palpitation. The heart's action is disturbed in various ways, is frequent rather than slow, usually forcible, and often irregular and unequal. The sounds may be pure, or the first sound at the apex impure, or the second aortic or pulmonary accentuated. The pulse varies with the condition of the heart. Tension and size are usually not materially altered. The cause of the alteration is not easy to determine. That it is due to the increase of work on the part of the heart seems at first sight reasonable, since it has been claimed that blood pressure is increased during coitus, yet, on the other hand, periodic increase in the work of the heart does not usually lead to hypertrophy. The diagnosis of the condition is based partly on the anamnesis, partly on exclusion of other causes. The treatment includes cessation of onanistic habits, and other unfavorable practices (tobacco, alcohol), as well as symptomatic treatment of the condition. —*The American Journal of the Medical Sciences.*

SURGERY.

ANESTHESIA.

Anesthesia must be of the shortest possible duration. The administration should never be commenced until all other preparations have been completed, and the surgeon is ready to proceed with the operation. The practice so common in hospitals of anesthetizing one patient while operation is transpiring upon another and sustaining the anesthesia until the surgeon be ready to proceed, is reprehensible in the highest degree. It amounts to culpable negligence, and the surgeon authorizing such an act should be strictly accountable for any untoward results to the patient brought about by such malpractice.

Whenever possible the patient should be spared the sight of the immediate preparations for operation and any unnecessary display of instruments.

Never attempt to hasten anesthesia by the violent subjugation of the patient. In beginning the administration, give the patient time to become accustomed to the vapor, and to acquire confidence. A little time and patience exercised at the outset will prove a saving of time and trouble in securing the desired effects, and, invariably, will obtain a much more satisfactory anesthesia, with far less shock and harmful effects than follow that brutal, cowardly and unjustifiable method of forcing the ether by piling all available individuals upon the prostrate body of the frightened, struggling victim, and crushing him down until he be choked into insensibility.—*The Medical and Surgical Reporter.*

PICRIC ACID FOR BURNS.

French surgeons have recently been using a solution of picric acid for the first treatment of burns; and it has been found that the pain which is caused by the burning of the skin can be almost immediately alleviated, or altogether removed, by painting the affected surface with a strong solution of picric acid. It is stated that the remedy has proved to be quite harmless, and that the yellow stains, which are caused by its application, can be easily washed out with boric acid. The general verdict, of those who have employed the remedy, is that it has greatly lessened suffering, and has, therefore, probably saved life, while it would appear that even severe cases thus treated have recovered more speedily and completely than would have been the case under other forms of treatment. It would, therefore, be well, presuming that experience of the remedy in this country gives identical results, if the medical officers of factories or workshops, where accidents like burning or scalding are common occurrences, would direct that solutions of the acid should be kept at hand, and explain the method of its application to the workers.—*The Medical Times and Hospital Gazette.*

GYNECOLOGY.

WHEN AND HOW TO CURETTE THE UTERUS.

INDICATIONS.

The operation of curetting the uterus is indicated in a number of pelvic disorders which differ widely in their nature and gravity.

(1) Probably the lesion that most frequently demands its performance is chronic endometritis. But great care is required in the proper selection of cases; and this for two reasons. (a) Many cases of endometritis recover completely without any operation. Thus in simple uncomplicated cases we would first try the effects of nonsurgical remedies—rest, hot douches, saline aperients, glycerine and ichthyol tampons, such drugs as bromide of potash, chlorate of potash hydrastis and viburnum, and the occasional swabbing out of the uterus with iodine or carbolic acid. Should these measures fail, curetting is distinctly indicated, and will, in the great majority of cases, effect a cure. (b) Endometriti is frequently associated with other and much more serious pelvic lesions, whic call for a very different line of treatment. Thus endometritis, due to sepsis c

gonorrhea, is often complicated with pelvic cellulitis and peritonitis, with ovaritis, salpingitis, or pyosalpinx. To curette the uterus in the presence of such lesions would be to court disaster. I have seen a slumbering salpingitis converted into a virulent and fatal pyosalpinx by such a proceeding. It may be laid down as an absolute rule that if there be evidence of periuterine inflammation or disease of the uterine appendages, curetting is contraindicated.

(2) The second great class of cases which call for curetting are those in which we have, as the result of the incomplete emptying of the pregnant uterus, the retention within its cavity of pieces of membrane, fragments of placenta, even portions of a putrid fetus. These retained morsels may give rise, on the one hand, to severe uterine hemorrhage, and on the other to septic absorption. The symptoms are not at all in proportion to the size of the offending fragment. It is remarkable how small a piece of placental tissue—not larger than a hazlenut—will cause frightful and most persistent floodings. On the other hand, I have removed a mass of placenta as large as a man's fist, which had been retained in the uterus for many months, and which only caused an offensive discharge.

In these cases there must be no delay in operating—no dallying with medicinal remedies. Ergot and hydrastis are useless to relieve the hemorrhages; antiseptic injections will not stop the offensive discharges; quinine and antipyrin will not check the progress of septic absorption. As soon as the presence of the offending fragment is diagnosed it must be removed with the curette. In no class of cases does operative interference yield more brilliant results. The hemorrhage ceases at once, the offensive discharge disappears, the symptoms of septic intoxication subside, and the patient's health is restored with marvelous rapidity.

But it must be remembered that in the septic cases the prognosis depends to a large extent on the degree of septic absorption. If it be only a sapremia, the removal of the putrid fragment will cure the patient; if it be a septicemia, the outlook is much graver. Curetting will undoubtedly save many cases of puerperal septicemia in which the *fons et origo mali* is a mass of necrosing material in the uterus, and in which the systematic infection is not profound. But it is obvious that if a pyosalpinx have formed, or there be suppurative peritonitis, curetting will do positive harm. Curetting is not a panacea for puerperal fever; much discrimination is required in the selection of suitable cases. The best results are obtained where the symptoms clearly point to a retained and putrid fragment in the uterus, where the surgeon is called at an early stage of the disease, and where the clinical phenomena are those of septic intoxication rather than of septic infection.

(3) There are two diseases of the uterus in which curetting has been advocated as a palliative, namely, myoma and cancer. It has been recommended in certain cases of myoma as a means of checking the excessive losses. I cannot too strongly condemn such a proceeding. If the tumor be causing symptoms severe enough to call for interference, then it is better to perform removal of the appendages, myomectomy, or hysterectomy. If the symptoms be so slight as not to call for such severe measures, rest and the usual medicinal remedies will suffice. Curetting, at best would only temporarily relieve the patient, and might do infinite harm by inducing sloughing of the tumor and subsequent septicemia.

So, also, in the case of cancer, it is questionable if it afford any but the most transient benefit. Even if it temporarily relieve the patient, it is obvious that we cannot by its means remove the whole disease and so cure the patient. I have, it is true, seen striking temporary relief afforded by freely scraping and gouging away the friable rotting diseased surface, and then vigorously searing with Paquelin's cautery, the raw tissue exposed. The hemorrhage and stinking discharge cease for a time, the patient's pain diminishes, she puts on flesh, and frequently buoys herself up with false hopes of cure. But at best the respite is short; and in many cases when the disease again manifests itself it advances with fearful rapidity. When the growth is strictly limited to the cervix or the endometrium, we should offer the patient the more certain hope of cure afforded by vaginal extirpation of the uterus. If the disease be too far advanced for this operation, the less we interfere with it the better.

(4) Lastly, curetting is occasionally demanded for diagnostic purposes. Where we suspect that the patient is suffering from early cancer or sarcoma of the uterus we may obtain, by curetting, fragments of tissue for miscroscopic examination, and may thus diagnose malignant disease in its early and most remediable stage.

ARMAMENTARIUM.

The armamentarium for curetting the uterus should include the following: Anesthetics, antiseptics, Clover's crutch, razor, speculum, vulsellum forceps, a set of uterine dilators, a set of curettes including a "flushing curette," uterine sound, scissors, six Playfair's probes (or some substitute) armed with absorbent wool, Paquelin's cautery or a bottle of iodized phenol, iodoform gauze, sponges or gauze compresses, catheter, douching apparatus. I shall presently refer in detail to the use of these various instruments.

ASEPSIS.

It is of the utmost importance that everything that comes in contact with the genital tract during the operation must be aseptic. The instruments should be made entirely of metal and should be boiled for fifteen minutes in soda solution (one per cent.) immediately before each operation. Instead of sponges I use gauze-compresses made of a square of gauze folded into eight thicknesses. These should be sterilized before the operation by boiling or steaming for an hour. They are not quite so absorbent as sponges, but they are cheap, easily prepared and easily sterilized. The same compress should never be used twice; and after the operation all that have been used should be destroyed. For the disinfection of the hands of the surgeon, his assistant and the nurses, I believe in prolonged scrubbing with soap and lysol solution (1 in 100), using a nail brush and loofah, followed by immersion in corrosive sublimate solution (1 in 1,000).

PREPARATION OF THE PATIENT.

The preparation of the patient is important. When we can choose our time the operation is best performed about midway between two menstrual periods. In many cases, however, as when the hemorrhage is continuous or the symptoms are urgent, we must operate without delay. For twenty-four hours before the operation she must rest in bed. The bowels must be freely opened the day before; and on the morning of the operation an enema should be given to ensure an empty rectum. The vagina should be well douched the evening before, and again on the morning of the operation, with some reliable antiseptic solution—lysol, iodine, or corrosive sublimate. Immediately before the operation the nurse should pass the catheter and empty the patient's bladder.

The patient having been anesthetized she must be placed in the lithotomy position—and this is most conveniently effected by Clover's crutch. Even in cleanly women the hair about the genitals is laden with microörganisms and hence should now be shaved off with a razor. The vulva should be scrubbed with soap and lysol water (1 in 100), care being taken to remove the sebaceous matter that is apt to collect in the various folds.

The vagina should be similarly cleansed and as far as possible rendered aseptic. It should be vigorously wiped out with pads of sterilized gauze, in order to remove as far as possible the thick mucous discharge that besmears it. This mechanical scouring is more effective in freeing the vagina of germs than is mere douching with antiseptics.

Before commencing the actual operation a final bimanual examination should be made in order to make sure that there is no disease of the appendages and that the uterus is not fixed by perimetric adhesions.

INSERTION OF SPECULUM.

The perineum should be pulled back by some form of speculum. Sims' duckbill speculum is the form usually employed for this purpose, but it necessitates the employment of an assistant. I can strongly recommend, in place of it, the use of Auvard's speculum. This is heavily weighted with a ball of lead, so that the instrument is self-retaining, and by its own weight pulls back the perineum and posterior vaginal wall. I have found it of great service when I have had to perform curetting without assistance. It can only be used, however, when the patient is in the lithotomy position.

DILATATION OF THE CERVIX.

The next step is to dilate the cervix. This is not always necessary. For instance, in puerperal cases the os is usually widely gaping and the canal patulous. There are numerous methods of effecting dilatation, each of which has its own peculiar drawbacks, though some are much more objectionable than others. Of all methods, that involving the use of tents is the most dangerous. The risk of sepsis, with all its disastrous consequences, is so great that the tents may at once be dismissed from consideration.

Mr. Lawson Tait's method of dilating the cervix by slowly forcing through it a series of conical dilators, by means of continuous elastic pressure, is highly ingenious. It will, in the great majority of cases, effect its purpose well, and secure full and complete dilatation of the cervix. But, unfortunately, the method has many serious drawbacks. It is tedious, the process occupying from twelve to forty-eight hours. It requires very careful adjustment of the elastic cords in order to direct the dilator in the right direction. Should the uterus be retroflexed or anteflexed the dilator is apt to plough its way in to the muscular tissue of the uterine wall and not dilate the internal os at all. It necessitates frequent attendance and repeated examinations on the part of the medical man. It usually causes the patient much pain, sometimes necessitating the free administration of morphia. But probably the most serious objection to the method is that it is rather apt to be followed by inflammatory mischief in and around the uterus, partly from mechanical irritation, partly from sepsis. I used this method exclusively for over four years, but was compelled reluctantly to abandon it in favor of rapid dilatation by means of Hegar's dilators, or some modification thereof.

This latter method is infinitely easier, simpler, and less troblesome for the surgeon; it entails no suffering on the part of the patient, being effected under anesthesia; and I am convinced that it is safer. Whilst the dilatation it effects is not so perfect as that attained by Mr. Tait's method, it is all that is required for the purposes of curetting.

The particular dilators I myself prefer are those introduced by my friend Doctor Hawkins-Ambler, of Liverpool. I have used them extensively for the past ten months, and have found them very satisfactory. They consist of a graduated series of metallic bougies constructed on the principle of the "wedge-shaped" bougies used for dilating the male urethra. Being made of solid steel they are easily rendered aseptic by boiling in soda solution (one per cent.) for a few minutes. Having a highly-polished surface they slide in with a minimum of friction. A set of six will be found sufficient for all ordinary purposes, and will easily, rapidly, and safely effect dilatation.

The anterior lip of the cervix should be seized with vulsellum forceps and drawn down to the vulva. If the uterus be so held (by adhesions) that it cannot be pulled down, the operation had better be abandoned. Having ascertained by means of the uterine sound the precise depth of the uterus and the direction of its canal, the surgeon holds the vulsellum firmly in the left hand and with his right slowly passes the smallest-sized dilator (smeared with some antiseptic lubricant) into the uterus. If it meets with no resistance he at once withdraws it and passes the next size. If the cervix grips the dilator and resists its passage, the surgeon must press the instrument slowly inward. Having gotten it in he should wait a little before withdrawing it. After a longer or shorter pause the grip of the cervix will be found to relax, and then the instrument may be withdrawn and the next size inserted. If this relaxation of the cervix does not occur within a few minutes the instrument should be withdrawn and reinserted.

The limit of safe dilatation varies in different cases. Where the patient has previously had a child it is usually easy to dilate the cervix until it will admit the forefinger. But if the uterus be nulliparous, and particularly if it be infantile, the process of dilatation is more difficult, takes a longer time to effect, and should not be carried to the same extent. As a rule it is possible to dilate a parous uterus in from ten to fifteen minutes, whilst a nulliparous womb may require half an hour or more. When the most resisting part of the cervix is at the external os it is sometimes necessary to nick it bilaterally with scissors before dilating. The chief objection to the method of rapid dilatation is that if the tissue of the cervix be very resistant it will not stretch but tear. If unnecessary violence be employed, the uterus may be perforated or even ruptured by vertical splitting. Such accidents, however, should never occur if reasonable care be taken, and there be no undue force or haste on the part of the surgeon.

A less serious accident is laceration of the cervix, which may occur if its tissue be very soft and vascular, the teeth of the vulsellum tearing out when the dilator meets with resistance. If the degree of dilatation will permit, the forefinger should now be passed into the uterus and its cavity explored.

APPLICATION OF THE CURETTE.

For nearly all cases the sharp curette will be found preferable to the blunt one, and the best form is a modification of Simon's sharp spoon. It should be made wholly of metal so that it may be sterilized by boiling before each operation.

The largest size that will easily pass the cervix should be gently introduced and passed without any force until it impinges on the fundus. Steadying the cervix with the vulsellum the sharp edge should be pressed firmly against the mucosa and the curette drawn closely down—scraping off a vertical strip of the whole thickness of the mucous membrane and exposing the muscular coat.

By a repetition of this maneuver a series of parallel strips are removed until first the anterior, then the posterior, and then the lateral walls are completely denuded. The surgeon must then carefully curette the fundus and the two upper lateral angles leading to the Fallopian tubes.

CLEANSING THE UTERUS.

The flushing curette is a most useful instrument when the uterus contains much debris—as in cases of retained secundines. The handle and stem are tubular, and if the instrument be connected with the tubing of a hydrostatic douch-can, will permit of the passage into the uterus during the act of curetting of a constant stream of weak antiseptic solution, which carries with it, as it escapes through the cervix, all clots and loose fragments of tissue. If the solution be used hot enough it will also check bleeding.

If the flushing curette be not used, the clots and tissue debris should be wiped away by means of probes covered with absorbent wool. The instrument commonly used for this purpose is " Playfair's probe." This consists of a wooden rod capped with metal. It is objectionable, because blood, et cetera, is apt to lodge between the wood and the metal, or soak into the wood, and be a source of sepsis. Where the probes are made wholly of metal (steel or aluminium), they are not open to this objection, being easily sterilized by boiling or being heated in a flame. They are, however, somewhat expensive (costing three or four shillings each).

For the last two years I have used wooden skewers ("pheasant skewers") instead of Playfair's probes, and have found them to answer admirably. I buy them from the poulterers in bundles of a hundred. To prepare them the ends must be roughly rounded off with a penknife and the skewers boiled or steamed for an hour or more to sterilize them. When wanted for use the end should be wetted and the wool rolled on in a thin film. They are so cheap (costing sixpence to one shilling a hundred) that one can afford to destroy, after each operation, all the probes that have been used. No probe is used twice, and in this way the risk of carrying septic infection from one uterus to another is reduced to a minimum. When it is remembered how frequently curetting is performed in septic cases, it will be seen that this risk is no imaginary one.

APPLICATION OF CAUSTIC.

Having thoroughly washed or wiped out the cavity of the uterus and cleared away all clots and debris, we should apply to the raw surface left some powerful cauterizing or disinfecting agent. For a long time I used to sear the interior of the uterus with Paquelin's cautery. The objection to its use is that the caustic effect is not distributed evenly over all the raw surface. The lateral angles and part of the fundus are apt to be missed, whilst the cervix may be so severely burned that sloughs form. At each spot it sears, its germicidal influence is of course intense; but it does not affect all parts equally, the sulci, crevices, and lateral angles escaping. For this reason it is better to swab out the uterus with a caustic liquid such as iodized phenol, applied on a wooden probe armed with absorbent wool. Any excess of the caustic that trickles out of the cervix must be at once removed with absorbent wool or gauze sponges.

PACKING THE UTERUS.

A long narrow strip of iodoform gauze (one inch wide and one yard long) should be ready at hand, and the uterus firmly packed with it, the end being left hanging out of the cervix into the vagina. This gauze packing serves four useful purposes—it soaks up all excess of iodized phenol, it checks bleeding from the denuded surfaces, it protects the raw surface from infection from the vagina, and it ensures the drainage of the uterus. The vagina must be wiped free from clots, et cetera, and then lightly packed with iodoform gauze. A pad of antiseptic absorbent wool is placed over the vulva and fixed with a T-shaped bandage. The gauze may be removed on the third day, and thereafter the vagina douched night and morning with lysol or iodine water. In all cases the patient must stay in bed for ten days after the operation.

RESULTS.

The immediate risk of the operation is extremely small and the ultimate result excellent, if the operation be skillfully performed, in suitable cases, and due aseptic precautions be taken. Conversely, if the surgeon use unnecessary force or bungle his work, or disregard contraindications or neglect the rules of surgical cleanliness, the patient runs the gauntlet of such disasters and complications as rupture or perforation of the uterus, laceration of the cervix, pelvic cellulitis, pelvic peritonitis, salpingitis, pyosalpinx, septicemia and pyemia—truly a formidable list! Not one of these evil sequelæ ought, however, to occur if the surgeon follow the indications I have laid down in this paper.—Doctor Christopher Martin in *The Provincial Medical Journal.—The Times and Register.*

OPHTHALMOLOGY.

THE USE OF STRONG SOLUTIONS OF ARGENTUM NITRATE IN THE TREATMENT OF OPHTHALMIA NEONATORUM.

Most of us have very positive opinions as to the proper treatment of ophthalmia neonatorum, but when some prominent oculists advise the use of strong solutions of argentum nitrate, and others say never use strong solutions, and claim that antiseptics and mild astringents are all that are necessary, it is hard for one who has had but little experience in these cases to decide which is the better treatment. It is also a surprising fact that many physicians do not consider the great danger in this disease, and I have had several cases which were allowed to run for days without any special care from the physician in charge.

In the prophylaxis, Credé's method is one of the best known. He recommends the use of a solution of argentum nitrate, 1–50, dropped into the eyes after birth, as soon as they have been thoroughly washed. As this sometimes causes irritation and swelling of the lids, I would recommend a weaker solution, 1–100. Houseman's method, which consists of washing out the vagina before labor with a one per cent. solution of carbolic acid, or a weak solution of bichloride of mercury, I think should also invariably be followed. The hygienic surroundings demand particular attention. There is little doubt that if these methods were always attended to the majority of these cases could be aborted.

During the first stage of the disease, cleansing the eyes often, at least once an hour, with sterilized water, a saturated solution of boric acid, or a 1–5000 solution of bichloride of mercury, is the proper treatment, and should be very carefully applied, that no injury may occur to the cornea. One is almost certain of a suppurating ulcer if the epithelium be broken, hence great care must be taken, in the use of instruments, not to touch the cornea. Ice packs may also be kept on during this stage, but many cases do not stand them well, and I consider the use of a compress, wet often in a solution of boric acid, just as efficient.

In the second stage, a weak solution of argentum nitrate, five or ten grains to the ounce, is strong enough in mild cases, but it is very often necessary to use one of greater strength, and I have had several cases in which a ten-grain solution has seemed to have no effect. It should not be allowed to touch the cornea, and I consider it necessary to rinse the lids with sterilized water before turning them back on the eye. I have used as strong as a forty-grain solution with no bad results, and in one case, in which large ulcers had formed before I saw it, I touched the ulcers with a solution of this strength, getting a very good result. Here I would like to say that I think you can, with a solution of argentum nitrate, check the spread of these ulcers as quickly and as certainly as with the electric cautery, and with less danger of destroying healthy tissue.

In turning the lids considerable skill is required to bring the upper retrotarsal fold into view, and this is absolutely necessary in order to get good results from the applications.

Doctor J. L. Lintenbeck advises the use of a solution of argentum nitrate, sixty grains to the ounce, in purulent ophthalmia, and in *The Journal of the American Medical Association* of August 12, 1893, Doctor Bettman recommends a fifty- to seventy-five-grain solution, saying that he only uses a ten-grain solution in very mild cases. Doctor Scott, in the June number of *The Ophthalmic Record*, recommends:

℞. Hydrastis Sulphatis,
Acidi borici,
Sodii biboratis, ... āā gr. v.
Tr. Opii Deodor., ... ʒss.
Aquæ Dest., ... ℥i

To be used as a collyrium from the beginning. He says this is all the medical treatment necessary, but as he uses a solution of argentum nitrate, once a day, I think considerable benefit is due to the silver solution. At least I cannot believe in this theory until he has given it a thorough trial without the silver. I have always thought that no special good could result from the application of a saturated solution of boric acid or a 1–5000 bichloride of mercury, as they are too weak, but believe that if the eyes were kept perfectly clean with sterilized water, and the stronger solutions of argentum nitrate were used properly, the results would be better.

I will not take up space to give a large number of cases, but would like to mention two in which I am sure I could not have obtained as good results with a weak solution of argentum nitrate. In the discharge of both of these cases the gonococcus was found in large numbers.

D. W., aged one month, entered Harper Hospital, April 6, 1893. The eyes began to discharge when he was three days old, and the case was treated by the family physician until April 5, when I was called. The lids were very much swollen, the discharge profuse and contained blood. It was remarkable that no ulcers had formed, although the whole cornea of each eye had a dull milky look. The bathing with boric acid solution was carried out every hour, and I used a ten-grain solution of argentum nitrate the first two days, but the condition remained about the same. I then used a forty grain solution, and the next day there was considerable improvement. After this an application of a twenty-grain solution was made for a few days, and the case rapidly improved. The child was discharged cured April 28.

M. R., aged two weeks. I first saw the case on June 18, 1894, when I used a ten-grain solution of argentum nitrate. The mother said the eyes had been discharging since the child was three days old, and no special care had been taken of them. She claimed the physician in charge told her it was only a cold. Each eye had a large suppurating ulcer of the cornea, and I was very much afraid one eye could not be saved. The mother and child were sent to the hospital on June 19. I touched the ulcers with a forty-grain solution of argentum nitrate, and the next day they looked quite clear. I continued the use of the forty-grain solution on the lids for the next two days. After this a ten-grain solution was used. The discharge quickly diminished and the ulcers healed rapidly. On July 5 the child was discharged cured, with very slight scars on each cornea.

I have seen several cases in which weak solutions (ten grains to the ounce) of argentum nitrate have been used by the physician with no results, and which were promptly cured by the application of a solution of twenty or forty grains to the ounce.—Geo. E. Frothingham, Jr., M. D., in *Harper Hospital Bulletin.*

THERAPEUTICS.

ELECTROLYSIS.

By electrolysis is meant that decomposition of chemic compounds which occurs under the influence of the electric current, and when used in medicine special reference is had to the decomposition of organic tissues.

The law of electrolysis is quite simple. It depends upon the mutual attraction of opposite polarities. As is well known, the chemic elements can be arranged in series, according to their electric affinities, in which one element will be electro-positive in relation to another element; the latter of course being electro-negative in relation to the former.

Under suitable mechanical conditions the electric current, in breaking up chemic compounds, causes the electro-positive element of that particular combination to go to the negative electrode, while the electro-negative element goes to the positive electrode.

Acids are electro-negative in relation to alkalies. Oxygen is electro-negative in relation to hydrogen.

In the electric decomposition or electrolysis of organic tissues, which contain salts of both organic and mineral acids and much water, the acids and oxygen will therefore go to the anode, while the alkalies and hydrogen will go to the cathode. The gasses, oxygen and hydrogen may be disregarded, except as to the necessity of providing a means of exit for them.

The points to remember in determining which pole to use in a particular situation, are these: Acids to the positive pole, alkalies to the negative pole; acids coagulate albumen, alkalies dissolve albumen. If, therefore, the object is to destroy tissue, as in the case of a solid tumor, and only one pole is to be inserted into the mass, it should be the negative pole, which attracts the alkali, having therefore much the same effect as the use of potassium hydroxid (caustic potassa), with the exception that it is under greater control, and applied in a more thorough manner, applied, moreover, in the deeper portions of the mass, rather than on the surface.

On the other hand, when the object is the coagulation of fluids, as in the case of a cyst or an aneurism, the positive pole, which attracts acid, and causes coagulation, is the one to be applied. In some cases, however, it is found useful so apply both poles at once. This method of bi-polar electrolysis is especially applicable in operations upon the nasal septum. A double-pointed electrode made after the fashion of those used for cautery purposes, and finished with steel or platnum needles, instead of the caustic loop, is used.

A projecting spur, or the thickened cartilage having been cocainized, is transfixed by the double point and the current gradually turned on, in increasing strength, until the limit of endurance is reached. A much better and more successful adjustment can be made if the subjective and objective effects of the current are watched, than if the strength of the application is regulated by the milliamperemeter. Using an ordinary galvanic battery, from six to eight cells may be placed in the circuit, giving an energy of from eight to twelve volts, and a rheostat (Massey's plumbago-rheostat is preferable) having a resistance of twenty thousand or thirty thousand ohms, interposed between the battery and the electrode. The resistance is gradually reduced until either the amount of action taking place seems to be sufficient, or the patient is unable to endure a greater strength of current.

It will usually be found that when the rheostat indicates about three thousand ohms resistance, this point has been reached. Such an application as this may be continued for from three to five minutes. French authors speak of twenty minutes' duration, but in our experience, longer than five minutes at a single sitting is not advantageous.

After the operation, the nasal passages should be cleansed with a weak solution of hydrogen dioxid, and, if there is any bleeding, it may be checked by simple pressure with a pledget of cotton saturated with a solution of hydrogen dioxid. Two or three sittings usually suffice. They should be separated by an interval sufficiently long to allow the slough which forms, as a result of the electrolytic procedure, to become detached, so that an estimate may be formed as to the necessity and extent of further operation. Detachment of the slough usually occurs in about three days. When the application has been prolonged beyond five minutes, sloughing is more extensive, and may not be completed for a much longer period. In such cases repetition of the application is less often necessary. On the whole, however, we prefer the less energetic procedure, as being capable of better adjustment to the requirements of the case.—*The Philadelphia Polyclinic.*

GENITO-URINARY.

SEXUAL DEBILITY—THEIR CAUSES.

(1) That the cases of sexual debility which are marked by imperfect erections and by premature emissions, are usually if not entirely due to hyperesthesia of some portion of the urethra.

(2) That masturbation has very little, if anything to do with it, beyond the that fact if indulged in to excess it may induce a tendency toward this hyperesthetic condition, but this is no more marked in masturbators than it is in those persons who indulge to excess in the venereal act.

(3) That organic stricture has little, if anything to do with it; but that associated with this hyperesthetic condition there is an irritable condition of the canal which produces spasmodic contractions of the urethra upon attempts to pass instruments, oftentimes during the first act of micturition and at the time of connection.

(4) That varicocele plays no unimportant part in these cases.

(5) That neuralgia of the testis, if a cause of this disease, induces it merely as a secondary consequence to the pain which is one of the distinguishing features of this disease.

(6) That tuberculosis, syphilis and gonorrhea may also play their part and should all be reckoned with in summing up the causes which may induce this peculiar and depressing condition of affairs.—Doctor T. R. Sturgis in *Gaillard's Medical Journal.*

MEDICAL MELANGE.

LEVULOSE IN DIABETES.

HAYCROFT has shown that fifteen grams (231 grains) of levulose may be assimilated daily by a diabetic patient without increasing the amount of sugar in the urine.—*Modern Medicine.*

MEDICAL ETIQUETTE.

WE have often wondered why in the name of what's decent, respectable and progressive in medical education there never was any provision made for the teaching of medical etiquette. It is all very well to say that a *gentleman* like a poet is born—not *made*, but it is also a well recognized fact that a little salutary instruction upon manners as well as ethics would not go amiss among the majority of medical students. For instance, on leaving college not one of them has ever had any instruction upon the manner of receiving a patient, of entering a sick room, of conducting his intercourse with his professional brethren, of dealing with the attendants and visitors of the sick room—to say nothing of those infinite details of conduct which go to make the daily life of a physician in city and in country, and upon which his ultimate life success so materially depends. A great deal of the unpleasantness which springs up in the practice of the medical profession between physicians is due to downright ignorance upon this point. We are in favor of having a distinct Chair of Medical Etiquette.—*The Saint Louis Clinique.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

POSTPARTUM HEMORRHAGE.*

By J. J. MULHERON, M. D., Detroit, Michigan.

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THE subject selected for our joint consideration this evening is not one of the sensational order. I mean by this that there has been no novel procedure devised for the relief of the affection; neither is the interest in it intensified by the discovery of any etiological factor in the shape of a specific germ. There is nothing new to offer in connection with it, in the way of either prophylaxis or therapeutics. It may, nevertheless, be interesting as well as profitable for us to review our knowledge of it. The means for its relief though old are effective in proportion to the promptness and decision with which they are applied. Its occurrence presents a crisis in which the personality of the physician (with all which that implies) counts for much. Certainly there is no complication with which the practitioner may be confronted that is better calculated to try his mettle, to test his presence of mind, to prove his fertility of recourse. A human life is in imminent peril, and while the means of rescue are at hand, if he whose duty it is to apply them lack the element popularly known as "nerve"—the element which makes the hero, who is after all but the man who does the right thing at the right time—the life will go out. Occasionally, too, disaster will attend even the best directed efforts.

These cases occur in the experience of the general practitioner whom they are very apt to confront without warning, and it behooves him to be well equipped with knowledge, skill and "nerve" for the emergency. There is not as much emolument or renown in attending them as there is in making celiotomies, but the character of the work is not less important. It, indeed, demands qualifications not essential to the surgeon who deliberately undertakes an operation with skilled assistants and every necessary provision at hand for complications. Death on the operating table makes a trying ordeal for the operator, but what shall we say of the mental suffering of the sympathetic and conscientious accoucheur who is confronted with the death of the woman whom he has just delivered of a child? Had I a pen equal to the task I could depict in proper phrase a scene in which I was lately an actor and one which has probably been duplicated in the experience of some here present. I would tell you of the joy and peace and happiness of husband, wife and near friends because of the successful birth of the long-wished-for son. The scene suddenly and without warning changes. The sweet smile of happy motherhood gives way to the sunken and ghastly cheek; the eye which was radiant with joy is rolled up and fixed. The bed chamber reverberates with frantic appeals to the doctor to save the dying woman. The woman has been seized with flooding and although the discharge is promptly checked the shock has been too great and the heart, previously affected with an organic lesion, stops never to go again.

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*Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

Postpartum hemorrhage occurs from either of two causes—the blood is non-coagulable as in hemophilia, or the uterus does not contract with sufficient vigor to close up the sinuses. A woman with a predisposition to hemophilia (a bleeder) is very certain to have her life endangered through separation of the placenta, as she is, indeed, from a large solution of continuity in the non-puerperal state. Normally the blood of the pregnant woman is fortified against the occurrence of postpartum hemorrhage by containing an excess of fibrin. The fact, too, that the uterine sinuses are traversed by constricting bands of muscular fibre favors the formation of a styptic clot at these locations.

Hemophilia is, however, a very rare affection, and the practitioner has generally to do with postpartum hemorrhage resulting from imperfect contraction of the uterus. This imperfect contraction is in turn dependent on a variety of causes, such as anemia, spanemia, exhaustion and irritability of the uterine fibre from protracted labor, too frequent child-bearing, et cetera. One prominent American obstetrician has declared that the occurrence of postpartum hemorrhage argues the mismanagement of labor by the accoucheur, and another asserts that the loss of even two ounces of blood after the delivery of the placenta is pathological. These are unquestionably extreme views, but without a doubt a proper supervision of the woman during the later months of her gestation would do much towards preventing excessive postpartum bleeding. The woman's family history and her own personal history should be inquired into for evidences of predisposition to hemorrhage. Where a tendency to hemophilia exists the most reliable remedies are oil of erigeron and cimicifuga. The oil is absorbed with little or no chemical change and during its presence in the blood acts as a local tonic stimulant to the errant arterioles. When I have reason to suspect a tendency to bleed I give the woman during the last six weeks of gestation ten drops of the oil of erigeron three times on a lump of sugar. This oil possesses the advantage over oil of terpentine (which is also a valuable remedy) of not irritating the kidneys through this prolonged use. Cimicifuga is a very direct tonic and sedative to irritable uterine tissue.

In atonicity of the uterine tissue general systemic medication should be combined with remedies having especial affinity for the uterus. The combination thus suggested consists of iron, strychnine, cimicifuga and hydrastis. The latter drug has a somewhat specific action as a tonic to the endometrium.

The condition of the woman during labor furnishes us with a tolerably reliable index to the possibility of undue hemorrhage with the detachment of the placenta. I look upon mental irritability and restlessness associated, as the condition usually is, with an irregular, rapid pulse, as a harbinger of flooding. In such condition I give ergot—not in the large (drachm) doses which produce the characteristic prolonged tonic contractions, but in small (ten drop) doses every fifteen minutes for, say, two hours before the termination of the second stage of labor. I believe it good practice in threatening cases to commence this exhibition of the drug as soon as the os is fully dilated. It imparts tonicity to the fibre and increases the force of the clonic contractions.

The proper application of the CREDÉ method of expelling the placenta is a very efficient prophylactic against postpartum hemorrhage. I say the proper application, for there is an improper application. The application of this compression to a relaxed uterus is decidedly improper. It should be applied only to fortify the normal uterine contraction. To force out the placenta during relaxation, by either the *vis a tergo* or the *vis a fronte* (traction on the cord) is to encourage a free escape of blood from the uterine sinuses. The attached placenta is a tampon and should not be removed until the firm contraction is set up which closes up the flood-gates, which left open let out the woman's life. Before applying CREDÉ's method of compression the uterus should be incited to contraction by gentle kneading through the abdominal wall. It will be found that a light, quick circular movement of the hand is more effective than heavy kneading. The uterus should be thus kneaded for at least twenty minutes, and if at the end of this time it has not expelled the placenta the CREDÉ compression should be applied. The too early application of this method is harmful.

It has been held that chloroform anesthesia predisposes to postpartum hemorrhage. My experience does not sustain this opinion. I am, on the contrary, disposed to regard it as a prophylactic. It relieves the patient of physical pain and mental anxiety. By so doing it tends to prevent exhaustion of the nervous system and to favor a better action of the uterus.

I believe that a faulty treatment of the funis is sometimes responsible for postpartum hemorrhage. We have been taught from time out of mind to throw two ligatures around the cord and to make the section midway between them. This is done to prevent the escape of blood from the child and from the mother. (?) That such a practice should continue in the light of modern physiology is most singular. My practice is to tie the cord with two ligatures half an inch apart, but to cut it so as to leave both ligatures on the portion of the cord attached to the child. Of course, as there is no vascular connection between the placenta and the uterus, the only bleeding that can occur from the uterine end of the severed funis comes from the placenta and from the placenta alone. By letting the blood out of the placenta in this manner you not only diminish its size and thus facilitate its removal but you favor contraction of the uterus. The detached placenta is a foreign body *in utero*, and we know that contractions are more readily excited by a substance partially filling the cavity than by one which distends it. We find an illustration of this fact in tamponing for postpartum hemorrhage.

The timely use of the forceps may do much to prevent this accident. As to the time of applying the instruments there is only one practical guiding rule: Apply them after progress is retarded just as soon as the first symptoms of exhaustion appear. With the TARNIER axis-traction forceps we are enabled to seize the head with comparative impunity at any time after it has engaged at the brim and the os is fully dilated. To continue the woman indefinitely in ineffectual suffering is at once inhuman and unscientific. I have great faith in nature, but have no patience with the accoucheur who throws the whole burden of a difficult delivery on her. The close student of her incomparable ways will know when to lend her a hand. "Leaving the case to nature" is too often a refuge for ignorance and timidity. If the woman is to be left to nature under all circumstances why is she not quite as safe in the hands of the ignorant midwife as in the care of the physician? The forceps are, it is to be feared, sometimes credited with injury to mother and child which would have been avoided had they been applied sufficiently early. I well remember how I was once held responsible for the death of the child and a severe laceration in a case to which I was called, where the midwife had "trusted to nature" for ten hours, during which time the head had been pressing on the perineum. There was an immense caput succedaneum and a swollen, brawny condition of the soft parts. I could detect no fetal heart sound before applying the forceps and the resiliency of the perineum had been quite destroyed by the prolonged pressure. Although the forceps were removed before the head passed through the vulva the perineum tore like a piece of pasteboard. In this case, too, the exhaustion of the uterus revealed itself in imperfect contraction after removal of the placenta, and only the most energetic action prevented serious results from hemorrhage.

In the presence of postpartum hemorrhage what is to be done? When the accident is anticipated long enough beforehand, special means of assistance may be provided in advance. In cases which have not been anticipated we are, of course, obliged to rely on the means ordinarily at hand. The first thing to be done is to seize the womb through the abdominal wall, the thumb on the median line of the anterior surface and the fingers spread out over the posterior wall. By thus fixing the thumb on the median line we guard against the hand slipping to either side and compressing one of the enlarged ovaries. Such an accident at this particular time might cause fatal shock. The disengaged hand is carried into the vagina, and as many fingers as can be introduced into the patulous os are passed up to the fundus to remove any shreds of membrane or loose clots of blood and to gently titillate the organ. Fortunately this procedure is usually effective. While it is being carried out a syringeful of fluid extract of ergot is injected into each thigh by the intelligent nurse, supposing such to be in attendance. Care must be taken not to use the fingers in the womb as scrapers. An adherent clot may be closing the sinus and it may not be disturbed. The conjoined manipulation failing, a peeled lemon may be carried into the womb and then squeezed. The lemon not being at hand a ball of cotton saturated with vinegar may be similarly squeezed. Citric and acetic acids are both valuable as irritants to stimulate contraction and styptics to promote coagulation. Hot water is another valuable intrauterine application. The heat should be slightly greater than can be borne by the hand. The nozzle should be removed and the tube directly introduced, thus favoring the entrance of the largest quantity in the shortest time. The patulous state of the os renders a return-flow catheter unnecessary.

When there is time for the provision of special appliances a strip of iodoform gauze four inches wide and six feet long, a SIMS' speculum, a tenaculum and a dressing forceps may be in waiting. By the aid of the instruments the gauze should be carried up to the fundus and not tightly packed. The stimulating action of the gauze thus loosely inserted is much greater than that of tight packing. The redundant gauze should be used to pack the vagina and the whole kept in place by a perineal bandage. A galvanic battery may also be held in readiness.

In this consideration of postpartum hemorrhage I have said nothing of bleeding from the torn circular artery in cervical tears. Such bleeding is not properly postpartum hemorrhage, from which it may be differentiated by the arterial color of the blood. When the blood is of this color the woman should be placed on a table and the tear exposed through a SIMS' speculum, when the spurting vessel may be secured either by a hemostatic forceps or by a deep ligature carried by a curved needle.

The hemorrhage having been controlled the consequent depression demands attention. This depression is necessarily grave in proportion to the amount of blood lost. The condition of the heart has much to do in determining the prognosis. In a case which terminated fatally in my hands within thirty minutes after the alarm was first sounded, there was serious organic heart disease. I had succeeded in very promptly arresting the hemorrhage but the heart failed.

The first thing to be done after the bleeding has been checked is to elevate the foot of the bed to as acute an angle as convenient—the nearer forty-five degrees the better. Then inject into the rectum two ounces of a mixture of equal parts of warm milk and whisky. A hypodermic injection of one-sixtieth grain of strychnine sulphate may also be given. These are usually sufficient. Should more be required employ autoinfusion, by tightly bandaging the legs from the feet upward. This forces the blood from the extremities, where it is not needed, into the trunk where it is very much needed. Heat may be applied to the cerebellum by means of cloths wrung out of hot water. In desperate cases inject a sterilized saline solution subcutaneously. A teaspoonful of common salt and a half-teaspoonful of sodium bicarbonate in a pint of water makes the solution of proper strength. A needle somewhat larger than the ordinary hypodermic syringe-needle should be adjusted to the tube of a DAVISON's syringe and the whole pint of solution may be injected if necessary, at different points, two or three ounces being employed at each point. As soon as reaction has been stimulated give freely warm drinks, such as gruel and beef tea. The fluid is readily absorbed and the volume of the circulation is thus promptly restored.

THREE SUGGESTIVE CASES.*

BY DAVID INGLIS, M. D., DETROIT, MICHIGAN.

ON THE LOCAL SEAT OF HYSTERIA.

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A SHORT time ago DOCTOR BURR kindly called DOCTOR EMERSON and myself to see a patient who presented a remarkable combination of symptoms, and it has seemed to me that not only is the case itself worthy of being recorded, but it sets us thinking in ways that may be helpful.

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* Read before the DETROIT ACADEMY OF MEDICINE.

The patient is a lady, aged about sixty years, who has been insane for about fifteen years, and has lived in various asylums during that time. Her insanity has always been of the expressive type, so that it can fairly be classed as mania, although she has never been violent or difficult of control. While thought has been confused her memory has remained good, her power of expression good, so much so that she gave us an account of a certain occurrence at Kalamazoo many years ago, in which the details were so well portrayed that we at once seemed to see the affray and were convinced of the accuracy of her picture of it. Her reasoning power, from such premises as she uses, is active and pretty accurate. After all these years she shows no marked deterioration from the mental standard normal to her deranged mind. It is interesting to note the fact that the chronic insane establish a new mental standard which becomes their normal one, and asylum physicians easily recognize a fresh departure from this new standard.

Some two months before we saw her she had been struck on the right side of the head by another patient who assaulted her with a wicker piano stool. The blow was not severe, and no immediate effects were noticed. We could find no lesion although there seemed to be a little thickening just in front of the right parietal eminence. About ten days before our visit the patient had a sick spell which, although not accompanied by fever, seemed, in other respects, to closely resemble an attack of grippe. She complained of general malaise, vomited and had various aching pains. Circulation failed until she became for a short time somewhat cyanotic. There was great bodily weakness, but no cough or any local symptoms.

When we saw her she had no fever; pulse 84, stronger in the left radial than in the right. She vomited the same day, once. Her face was suffused but not cyanosed. Doctor Burr had noticed a systolic endocardial murmur, loudest at base, but at the time of our visit this was not demonstrable. We also discovered the existence of glycosuria, which must have been of recent onset for a previous urinalysis, some two months before, had shown normal urine. The quantity of sugar was large. Otherwise there was no discoverable visceral lesion. The remarkable symptoms, however, were these: She herself had complained of numbness in her left arm and leg. On testing we found the left side markedly hyperesthetic; a current of three milliampères which could not be perceived on the right side was painful on the left. Not only was there left hyperesthesia but we easily established right anesthesia. She recognized various tactile tests promptly on her left side but failed to do so on her right. This applied to both arm and leg. In the motor sphere there were also changes. As she lay in bed all her spontaneous movements were done by her right arm; the left lay inert. She could move it and do any specified act, but unless told to do so she did not use it. In the legs this was reversed; she kicked or drew up only her left leg; the right remained inert. The right pupil was larger than the left. The grip in the right hand was distinctly stronger than in the left. The reflexes were similarly confused. The right patellar was exaggerated; present in the left leg; exaggerated in the right arm; lost entirely in the left arm.

Such was the case. I present it because it opens up several questions of interest.

On what basis can we explain such a mixed series of sensory and motor changes? To explain them by organic changes we would be compelled to believe that she had not one but many lesions. The paresis of her left arm and right leg could only be accounted for by separate lesions of the cord, and a different lesion must account for the inequality of the pupils; but a cord lesion to produce paresis of the right leg would reduce the patellar reflex, which was exaggerated. In the case of the arms her left was paretic, and there the reflexes were not exaggerated but wholly lost. Again, the lesions which produced the left hemianesthesia and right hyperesthesia must be totally different from those causing the motor symptoms, for the lesions, if any, must have been at least as high up as the medulla, probably higher. The glycosuria might well indicate a bulbar lesion. A multiple neuritis might explain some of the symptoms, but is excluded by the exaggeration of the reflexes.

The only remaining explanation of her symptoms is that of hysteria. I am quite well aware that there are objections to this also, notably the glycosuria, but I believe that this more nearly explains the case than any other theory. The question now comes up, can hysteria come on in the insane, and be recognized in them? In the present case the patient had long established a certain normal mental life. From this normal she suddenly varied. A new set of symptoms were set up, a set of symptoms which indicated that the sensory and motor areas of the cortex were working irregularly; some too little, some too much. If we could imagine the overactive parts to be red and the inert parts to be blue we could seem to see the cerebral cortex looking patchy. Such seems to me to be the condition in hysteria. In other words, the hysterical patient has patches of cortical motor paralysis and other patches of motor spasm; patches of sensory paralysis and others of sensory spasm; patches of mental exhilaration, patches of mental depression; and these patches vary from day to day like the colors in a soap bubble, or may remain stationary for long periods.

There is a striking analogy between the patches of functional derangement of hysteria and the patches of organic change of general paresis. Even in general paresis the patches of mental exaltation may change to patches of mania or depression. Hysteria and general paresis both present occasional epileptiform or other convulsions, both present partial anesthesias or pareses, both present emotional and intellectual changes. Spinal lesions, notably, posterior sclerosis, often accompany general paresis. Spinal irregularities of action accompany hysteria. I feel that this analogy is worth remembering, because hysteria is so commonly regarded as an imaginary, an unreal disease. I think it will help us if we learn to regard it as having a definite location. Its location, it seems to me, is the same as the location of the lesion in general paresis, in the cerebral cortex and spinal gray matter. Our present patient I conceive to have lived along for years with some derangement of the organ of her mind by which her mental percepts differed from the external things. Her premises were false, her logic was true. So she was insane. As the result of a probable attack of grippe her cerebral cortex was disturbed in its nutrition. Its functions went on irregularly; patches of lessened activity alternated with patches of increased activity, and she set us to try to locate the seat of trouble for a very curious mixture of symptoms.

I have since learned that she has almost entirely recovered from her pareses and sensory troubles, and that the glycosuria has all but disappeared. The cortex has been fed and has resumed regular business.

[illegible] different [illegible] and apparently [illegible] and muscular [illegible] sense of responsi- [illegible] impossible. I [illegible] slight cough [illegible] a high; heart- [illegible] has much [illegible] can hardly get the [illegible] The urine [illegible] December, [illegible] urine contains [illegible] some mucous [illegible] shows no [illegible] is very short of [illegible] May 11, 1895, [illegible]—albumi- [illegible] much the same [illegible] in the progress [illegible] relatively [illegible]

[illegible] causes of this fatal [illegible] death. In 1887 [illegible] and diet which I [illegible] looked upon him [illegible] habits morally, [illegible] his big muscles he [illegible]

[illegible] these years I tried [illegible] and now feel more [illegible] They were first [illegible] and later began [illegible]

[illegible]

[illegible] Doctor SHURLY kindly [illegible] a resident of another city, [illegible] is two and one-half [illegible] 1891. He had taken [illegible] but the fits continued [illegible] he was thoroughly saturated [illegible] pains in the left side of the head; [illegible] right facial paralysis; facial [illegible] from the bromides. The [illegible] Jacksonian type, taking in the right face [illegible] aphasia during the fit; at times a general [illegible]

[illegible] the bromides and put him on atropia. He soon cleared up mentally and under the use of antifebrin and judicious exercise, together with attention to his digestive organs, which were badly irritated, he became free from his fits, so that between January 31 and August 31, 1894, he had none. He had scattering fits from that time until March, 1895, when he had fourteen in one day. He had been doing some business in Chicago. DOCTORS PATRICK and SENN contemplated trephining but deferred doing so and put him on specific treatment. He was brought to Detroit and again I found him going through frequent fits involving the right arm and face. He was unable to speak during the fit but could write. I show you a note written by him while the spoken language was impossible. Again, under the use of antifebrin and ergot, he cleared up, and the fits ceased. He resumed work and seemed well. He fell into the status epilepticus last week and after a series of convulsions lasting about ten hours he died.

The postmortem showed a slightly protruding reddish mass of circular outline, about one inch in diameter, at the posterior part of the left third frontal convolution. The ascending frontal convolution appeared normal; further, all the frontal convolutions as they rounded the longitudinal fissure seemed swollen and reddish like the isolated mass above mentioned. On cutting into the frontal lobe a hard infiltrating mass, evidently a gumma, had involved practically the entire white matter of the left frontal lobe.

The suggestions of this case are these: In the first place ought surgical measures to have been resorted to? In view of the fact that in the month of October, 1893, the convulsions were limited to the right arm and face or at least, even when general, began there, the question of a localized lesion was practically settled even then. I could not wonder that DOCTOR PATRICK proposed operation last March, yet in view of my previous experience as to the beneficial effect of medicinal treatment I did not hesitate to defer operation. When the brain was exposed and the tumor accurately occupying BROCA'S convolution or the anterior part of it presented itself I confess to a moment of doubt, but when I found the extensive involvement of the cortex of the anterior lobe at the longitudinal fissure and of the white matter within, it became clear that no surgical interference was possible. Had a surgeon cut down upon the third frontal convolution he would indeed have found the tumor but he could have done nothing more than look at it. Further, the fact that the arm was always convulsed would have led the surgeon to have trephined over the arm center. Here he would have found nothing abnormal on the cortex. The lesion evidently had its origin in the center of the frontal lobe and came to the surface at widely removed parts of the frontal lobe, at the median line and at the lower end of the fissure of SYLVIUS.

The case is instructive as showing that even in cases in which organic defect exists the action of the surrounding cerebral structures can be favorably modified by medicinal and hygienic treatment. While I was unable to cure his gumma I was nevertheless able to make life comfortable and even useful to my patient.

It is further instructive as showing how one frontal lobe can be almost entirely disorganized with little or no interference with the patient's mental capacity; indeed except for the convulsions with little interference with the entire range of activities of the cerebrum.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, OCTOBER 21, 1895.

THE PRESIDENT, EUGENE SMITH, M. D., IN THE CHAIR.
REPORTED BY LUTHER S. HARVEY, M. D., SECRETARY.

DISCUSSION OF PAPERS.

DOCTOR MULHERON read a paper entitled "Postpartum Hemorrhage." (See page 481.)

DOCTOR METCALF: I agree with the author of the paper in the main; but wish to emphasize the necessity of having the patient under observation for some time before confinement, in order that she may be built up if necessary. I advocate the use of ergotine hypodermatically, before labor commences, in doses of one-tenth of a grain; also large doses of quinine to be given shortly before labor. I believe that it is well to watch these cases for an hour after delivery if postpartum hemorrhage be threatened.

DOCTOR TAPPEY: I have in mind a case in which continuous pressure with the hand on the abdomen for some time was successful; also another case that died within twenty minutes in spite of all treatment.

DOCTOR LONGYEAR: The CREDÉ method should not be used too quickly after the birth of child to express the placenta. It is better to wait for from twenty minutes to one-half hour. I believe that if the tampon is used it should be packed in snugly.

DOCTOR CARSTENS: We should try to diagnose the condition before labor. If the patient has nagging pains, dragging along hour after hour, and finally necessitating the use of the forceps, then we are apt to have postpartum hemorrhage. Very often chloroform is unjustly blamed in these cases. The tampon is only useful as an irritant to the uterus. We can sometimes control hemorrhage by compressing the adominal aorta.

DOCTOR SMITH referring to his early practice, advised cold water applied to the abdomen.

DOCTOR DOUGLAS: I believe that we have better methods than the applying of cold water to the abdomen. I would call attention to the danger of using ergot hypodermatically, and also to the danger to the child if the drug is used early.

DOCTOR INGLIS: I remember a case in my early practice in which irritating of the uterus by the hand failed to induce contraction, but the introduction of ice into the uterus had the desired effect. I wish to suggest a remedy that has not been mentioned, the FARADIC current. I recall a case in which the hemorrhage was controlled by this means.

DOCTOR DELOS PARKER: I believe that whisky should not be used for its stimulating effect in this condition as it dilates the capillaries.

DOCTORS CARSTENS and **DOUGLAS** did not agree with **DOCTOR PARKER**.

DOCTOR MAASS: I wish to call attention to a method of controlling hemorrhage by twisting the uterus around on its axis.

Doctor Mulheron: I believe that a small amount of gauze used as a tampon acts better than a large quantity by causing gentle friction and thus inducing contractions. I do not think that it is advisable to ligate the placental end of the cord.

STATED MEETING, OCTOBER 30, 1895.

The President, EUGENE SMITH, M. D., in the Chair.
Reported by LUTHER S. HARVEY, M. D., Secretary.

DISCUSSION OF TOPICS.

"THE DIAGNOSIS OF DIPHTHERIA."

Doctor Aaron: I do not believe that enough recognition has been given to the Board of Health for the creditable innovation it has made in the matter of public supervision of cases of diphtheria. Following the good example of New York, like a number of other larger cities throughout the country, the Board of Health of Detroit has inaugurated a bacteriological department and has opened a laboratory and has put a capable specialist in charge of it. Physicians were requested to forward to this laboratory specimens of bacteriological deposits which were taken from patients, exhibiting membraneous and exudative inflammations of the throat and upper air-passages. These specimens were subjected to the usual culture-process, upon which the presence or absence of diphtheria bacilli was ascertained and so certainty in the diagnosis reached. While the Health Board does not mean to force physicians to submit such specimens, many physicians—I am glad to say—have availed themselves of this method both in the interest of their private practice as well as because of their sense of public duty. At present this excellent and promising work is rather new to the practitioners of Detroit, and we must abide our time until it has acquired the popularity it deserves. But we shall find that this self-assumed function of the Health Board will turn out to be one of the most important it has had to discharge.

Partly in order to interest the members of this society, so that participation in this matter may be more general, and partly in order to familiarize ourselves with the workings of it in the light of experience, I wish to present to you in some concise from a description of the way in which the bacteriological laboratory is operated and made helpful to the profession, on the original plan in the city of New York. Some time ago a series of investigations were made in the bacteriological laboratory of the Health Department of the city of New York to determine how long the Loeffler bacilli in cases of diphtheria remain in the throat after the disappearance of all false membrane. The results obtained are extremely significant, and have induced the department to establish a new rule regarding the discharge of patients who have suffered from diphtheria, and regarding the time of disinfection of the premises.

Out of 405 cases of true diphtheria which were subjected to repeated bacteriological examinations performed at short intervals during the course of the disease and convalescence, in 245 cases the diphtheria bacilli disappeared in three days, in 160 cases the diphtheria bacilli persisted for a longer time, namely, in 103 cases, seven days, in 34 cases, twelve days, in 16 cases, fifteen days, in four for four weeks, and in three for five weeks after the time when the exudation had completely disappeared from the upper air-passages. In many of these cases the patients were apparently well many days before the infectious agent had disappeared from the throat. These results show that in a considerable proportion of cases, persons who have had diphtheria continue to carry the germs of the disease in their throats for many days after all signs and symptoms of the disease have disappeared. No doubt the disease is largely disseminated by these persons who are apparently well, and who mingle with others while their throat secretions still contain the diphtheria bacilli. These experiments have led the New York Health Department to adopt the rule that no person who has suffered from diphtheria shall be considered free from contagion until it has been shown by bacteriological examination, made after the disappearance of the membrane from the throat, that the throat secretions no longer contain the diphtheria bacilli, and that until such examinations have shown such absence, all cases must remain isolated. Disinfection of premises, therefore, will not be performed until examination has shown the absence of the microörganisms. It is not within the intention of a board of health, in cases of obvious malignant diphtheria, to do anything else than to see to the undelayed and complete isolation of the patient. It is in doubtful instances—and these are not by any means infrequent—that the value and efficiency of reference to a bacteriological laboratory becomes evident. Even then, when the diagnostician believes from its clinical picture that he has an undoubted case of diphtheria, and he does not need to wait, and under the pressure of the risk of contagion he thinks he ought not to delay, he may still have professional gratification from eventually finding his diagnosis corroborated from another avenue of examination. At any rate it is evident that great good will come to both physician and patient, surely, in cases in which diphtheria appears in doubtful symptoms, and it need not be shown explicitly that the progress of the science of medicine is more likely to be furthered by a coöperation with the most advanced thought than by a listless conservatism which is as incautious of the economy of life as it is inhospitable to new developments in science and is wanting in public spirit.

As to the question—in view of the fact that the examination of the culture is pending in the laboratory—when the house of the patient should be placarded, it seems to me that, after all, a great deal always depends on the plain logic of the attending physician. If he should, by a fair surmise believe it to be best to forestall any risk, he might arrange for an immediate placarding of the house; in simpler cases the verdict of the bacteriologist might be waited for.

Doctor Inglis: I join most heartily with Doctor Aaron, and I think I voice the sentiment of all the physicians here in saying that the work of the Health Board is of great benefit to us. The public notification of diphtheria is purely a matter of protection. While the accumulation of scientific statistics may be an admirable thing upon the part of the Board of Health, the fact which stands first of all is that the Board is hired for the one sole purpose of trying to prevent sickness and death. Its only justification is to be found in its success in doing this. Furthermore, death or sickness by one name is no sweeter than by some other name. The proposal that the Board of Health shall quarantine only such cases of exudative angina as shall, by bacteriological examination, show the presence of the Klebs–Loeffler bacillus and shall limit the use of the term diphtheria to such cases is a dangerous one. If there is but one test of the existence of diphtheria, and that test the presence of the Klebs–Loeffler bacillus, then the Board will be landed in the following difficulties:

It will at once be obliged to distinguish between the true and the false bacillus. As these bacilli are precisely alike in form and culture the Board will be obliged to inoculate lower animals to ascertain whether they have a culture of true or false bacilli. It may be necessary to do this not once but repeatedly, as stated by WELCH, of Johns Hopkins. In some cases of diphtheria repeated, painstaking examination, microscopical and cultural, by a skilled bacteriologist, is required for the detection of the diphtheria bacillus. Again, in a certain number of cases which clinically are diphtheria the first inoculations may fail to show any LOEFFLER bacilli, yet a second inoculation made in a few hours will show many characteristic germs. Even this is not conclusive, for ROUX and YERSIN have shown that now and then bacilli from cases which clinically are diphtheria, and which show the KLEBS–LOEFFLER germ, may possess little or no virulence; moreover, they also say, as quoted by STERNBERG, "it is then possible by commencing with a virulent bacillus of diphtheria to obtain artificially a bacillus without virulence, quite similar to the attenuated bacilli which may be obtained from a benign diphtheritic angina, or even from the mouth of certain persons in good health. This microbe, obtained artificially, resembles completely the pseudodiphtheritic bacillus; like it, it grows more abundantly at a low temperature; it renders bouillon more rapidly alkaline; it grows with difficulty in the absence of oxygen." Such culture and inoculation is manifestly impossible in daily practice.

The next difficulty is this: Assuming that a distinction were possible, the Board could find perfectly well individuals in whom the true KLEBS–LOEFFLER bacilli were present. LOEFFLER himself found the KLEBS–LOEFFLER germ present in the case of a perfectly healthy child. PARK and BEEBE (*The Journal of Laryngology*) state that the examinations of the 330 healthy throats showed that in twenty-four bacilli existed in every way identical with the LOEFFLER bacillus, except that they were not virulent in animals; and as bearing both upon the existence of KLEBS–LOEFFLER bacilli in persons not diphtheritic, as well as the general question of the true nature of the LOEFFLER bacillus, I note a paper of the greatest interest and importance was read at a recent meeting of the Berlin Medical Society, by DOCTOR HANSEMANN. The paper carries especial weight because the author is announced as an assistant of PROFESSOR VIRCHOW'S, and his work and conclusions are presumably endorsed by the dean of modern pathology. DOCTOR HANSEMANN comes out in flat contradiction of the alleged properties and powers of the BEHRING immunizing serum. He asserts that in BRETONNEAU'S diphtheria the LOEFFLER bacillus is not always present, and is not its sole cause. This view will appeal to some clinicians and bacteriologists at least, for it is admitted that the LOEFFLER bacillus is present in some very mild cases of diphtheria as well as in apparently healthy throats, while, on the other hand, it is also known that a streptococcus diphtheria (or sore throat) is sometimes extremely severe and dangerous. DOCTOR HANSEMANN asserts that LOEFFLER'S bacillus is found constantly in rhinitis fibrosa, without producing diphtheria, and that these alleged pathogenic microbes may multiply in the throat without modifying the course of the diphtheria. All this, we believe, will have to be admitted by pathologists who have without bias studied the disease. DOCTOR HANSEMANN asserted further that in the case of animals an injection of a LOEFFLER bacillus culture caused not diphtheria, but a disease *sui generis*, the

Loeffler bacillus disease; that epidemic diphtheria had never been observed in animals; that guinea-pigs, in contact with diphtheria patients, had never taken diphtheria; but that a case is known where a cat, with which a child suffering from diphtheria had played, had developed all diphtheria symptoms, without, however, any **Loeffler** bacilli being discoverable. To quarantine a child or parent who was not sick at all would be regarded as intolerable by the public, yet if the distinction now sought to be established is correct every such case is truly diphtheria and a source of contagion.

The third difficulty which the Board would meet is this: Children die now of a disease which is characterized by fever, a putrid sore throat, great enlargement, and sometimes suppuration of the cervical glands; all this with great prostration. The disease is highly contagious but no **Klebs–Loeffler** bacilli are to be found. Under the proposed ruling the disease is not diphtheria. I doubt very much if the Board could pacify an indignant people who had been freely exposed to the contagion of this now nameless disease by saying that this was only a case of streptococcus infection. The Board would be in a peculiarly perplexing position if in a family of several children it should let a case of streptococcus infection run on without restriction, and presently other children in the family were to come down with true diphtheria, and yet such is precisely what is likely to occur, for **Reiche**, in forty-two autopsies on cases of diphtheria in which the **Loeffler** bacillus had been demonstrated during life, made cultures from the kidney and spleen. In 64.3 per cent. of these cases streptococci and staphylococci were found in the kidney or spleen, and in 45.2 per cent. streptococci were found alone. These cocci must have reached these organs through the circulating blood. He found streptococci in the kidney in one case which died on the second day of the disease, and positive results were obtained also on the third and fourth day. These results are evidently of much significance in indicating the frequency and the earliness of invasion of complicating microörganisms in diphtheria.

These objections are fatal to the plan now proposed by the Board. Whether they are fatal to the theory of the **Klebs–Loeffler** bacillus or not they demonstrate beyond question that the only protection of the people is to be found in basing the diagnosis of diphtheria upon clinical symptoms and not upon bacteriological cultures.

Doctor Collins: There is no doubt but that the establishment of a bacteriological laboratory is of great benefit to us. The length of time quarantine shall continue must be determined clinically. Within the past week I had a case that I regarded as true diphtheria, presenting the clinical symptoms. The next morning I made an inoculation and colonies of the true bacillus were found. On the fifth day I pronounced the child well. I was satisfied that the child was suffering from true diphtheria. But for the diagnosis of the Board of Health the people would not have believed it to be true diphtheria. I believe thoroughly in the diagnosis by means of the microscope and culture-tube. The more I see of diphtheria, the more I am in doubt about the diagnosis.

Doctor Flintermann: Before the discovery of the **Klebs–Loeffler** bacillus we made diagnoses of diphtheria by the clinical symptoms, and I think we are still able to make diagnoses in the same way.

Doctor Sherrill: I do not think that **Doctor Tibbals**, failing to find the diphtheria bacillus, would say: "You have not here to deal with a case of diphtheria." Some of the latest authorities say that when the bacillus is absent, if the clinical symptoms point to true diphtheria, treat accordingly.

Doctor Tibbals: The Board of Health should continue to do just as it has been doing. The benefit we derive from this is the aid we receive in the diagnosis of doubtful cases. There are chances of error in making the culture. Gargles may have been used immediately before the culture is made, or we may possibly contaminate the culture. When a case is diagnosed from clinical symptoms the Board of Health should accept the diagnosis of the physician and act accordingly.

REPORTS OF CASES.

Doctor Sherman: A few days ago I was called to see a patient of three years suffering from laryngeal diphtheria. The child had been sick twelve hours. One child in the family had died after being sick thirty-six hours. I examined the throat and found some membrane on both tonsils. I gave a dose of 1,000 units of antitoxin. The breathing was difficult and the child could not speak. The voice continued bad for five or six days, when he began to speak some. He has now been well for five days. To-night I gave a dose to another child who has every symptom of severe diphtheria. I have found that when the disease begins with the laryngeal form it is always fatal. This one recovered. I think the child would have died but for the antitoxin.

EXHIBITION OF PATHOLOGICAL SPECIMENS.

Doctor Brand exhibited a spleen weighing fourteen pounds, and a liver weighing thirteen and three-fourths pounds, removed from the same patient.

Doctor Metcalf exhibited 798 gall-stones, removed from one patient; also a fibroid of the posterior uterine wall, removed from a patient that gave a history of long continued hemorrhagia.

Doctor Flinterman: I would like to ask **Doctor Brand** whether there were symptoms of leucemia in his case?

Doctor Brand: The symptoms of leucemia were pronounced. The first count made in the early part of the disease showed the presence of white corpuscles in the ratio of one to thirty or forty. The second count made some time later showed a ratio of one to three or five.

Doctor Longyear: I saw the patient once and found that the spleen reached down to the pelvis. I examined the urine and found albumin. I also examined the blood and found pronounced symptoms of leucemia.

DETROIT ACADEMY OF MEDICINE.

STATED MEETING, SEPTEMBER 24, 1895.

The President, ARTHUR H. BIGG, M. D., in the Chair.
Reported by W. B. SPRAGUE, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Inglis read a paper on "Three Suggestive Cases." (See page 485.)

Doctor Emerson: In the first of the cases related by the doctor I concluded that we had a bulbar lesion (such as I believe occurs in a large proportion of grippe cases), even before we were aware of the glycosuria, and I think this was the cause of the diabetes. The symptoms—hyperesthesia, paresthesia, paralysis, et cetera—were not very distinct. What she called numbness was ascertained to be a peculiar tingling sensation. We had some discussion about the paralysis. I thought I saw her move the leg that seemed paralyzed. I think it quite likely that the motor disturbances were hysterical. Hysteria consists in a weakening of the functions of the cord varying in different parts. I do not think we shall find a fixed organic lesion for hysteria, but that it is a transient derangement of the nerve cells in the brain and cord which results in an imperfect expression of function. I believe that the largest number of cases of epilepsy and of hysteria are not traumatic.

DOCTOR ROBBINS: I was interested in the second case because it illustrates forcibly what I have long believed, namely, that Bright's disease is a general affection—an arterial sclerosis—often manifesting itself as anemia before albuminuria is present.

DOCTOR HITCHCOCK: To me it suggested the question of the relation of the uric acid diathesis to albuminuria, and whether there were not an arterial sclerosis developing during all the years of observation.

DOCTOR WYMAN: The doctor made a great effort to make a diagnosis and in his enthusiasm he would easily be misled by his patient's statements. It appeared to me that he labored hard to show some lesion in the brain or cord to account for the symptoms, while we have learned to account for the latter in some derangement of function by which the cord is not properly nourished. Fortune has thrown in my way a number of cases of cerebral syphilis, so that I have learned to look in the anterior cortex for the origin of these manifestations. I have trephined a number of times and have never lost a case, but have always found a degree of benefit. Even in the case related there might have been benefit from opening the skull and draining the arachnoid. It is absurd to think that in all cases of epilepsy a lesion must be found. There is difficulty in distinguishing between a lesion and disturbance of fluids. The permanence of the symptoms is aid in diagnosis. The fact of early disappearance of symptoms becomes an index of their source.

DOCTOR CONNOR: I very much admire the doctor's method of studying cases. If his methods and enthusiasm could become more general we should make more rapid strides in medical science. In regard to the second case, I believe that not only albuminuria but many other disturbances may come about by excesses in eating. The accumulation of effete material in the blood is a source of irritation to the various organs. In another case we might have had retinitis, and in another heart disease. Overeating causes more deaths than excessive use of alcohol and other stimulants. As to brain surgery, I believe DOCTOR RICKETTS says if you are in doubt cut the brain open and find out. I do not know that this is illogical any more than is the same principle applied to abdominal surgery, but, even after DOCTOR WYMAN's learned and skillful defense of cutting down on syphilitic gummæ in the brain, I cannot help doubting the advisability of such a course.

DOCTOR INGLIS: I did not mean to convey the meaning that DOCTOR WYMAN gathered from my paper. I did not expect to find a nerve or cell lesion as the cause for the conditions present. I was instructed in the same humoral pathology as he, and I believe that we must keep constantly before us the kind of blood that is being fed to the tissues. What I labored for was to instil the fact that hysteria is due to changed conditions in the cerebral cortex. Probably the same cellular elements are involved in hysteria as in paralysis. In the latter the change is organic—in the other there are shifting changes in the areas of the cortex. As regards operations for gummæ I have had another experience than **Doctor Wyman**, and it seems entirely unlikely that such superficial touching or handling should be of any value. I have recently seen it explained that the apparent curative effect of surgery is a transient and a passing one. In a summary of fifty-four cases of trephining for epilepsy only two cases are set down as cured.

EDITORIAL ARTICLES.

THE VOMITING OF CHLOROFORM ANESTHESIA.

The emesis following the use of chloroform is justly considered one of its greatest drawbacks, and any suggestion in the direction of suppressing this feature of its administration will be warmly welcomed. M. Lewin, in the *Revue de Chirurgie* for September, relates his experience with the use of vinegar. Out of one hundred and seventy-four cases in one hundred and twenty-five no vomiting occurred.

The rationale of the administration of vinegar is thus explained. Chloroform dehydrates the tissues. This dehydration influences the endothelium of the blood-vessels and causes coagulation of the blood. The chlorin, also, as it is eliminated by the lungs, exercises an irritating effect upon the larynx, thus being one of the exciting causes of the vomiting. If a cloth saturated with acetic acid be held over the nostrils the chlorin combines with the acetic acid and forms trichloracetic acid. The acetic acid also becomes a powerful factor in restoring the blood to its normal fluidity from its power of destroying fibrin.

Acetic acid must be applied in the following careful way: A piece of linen is saturated with vinegar and wrung out. This is placed over the patient's face as a mask. This must be kept on for three hours and for longer if possible. If the cloth dries it must be replaced by another.

The method is undoubtedly worth a trial for if successful it will obviate one of the chief objections in the application of one medicine's most beneficent measures.

THE GAPS IN EVOLUTION.

A **recent** writer in one of the monthly magazines draws attention to what he terms the gaps in evolution, and because of the existence of such infers the theory to be untrue. The most important of these gaps, he insists, are the absence of any doctrine to account for the origin of life, or for the mode in which variations occur, and for the fact that actual transition of one species into another has never been proved.

While the contention of this writer is undoubtedly true, it may be asked, does the existence of these lacunæ warrant the rejection of an hypothesis that has explained so much hitherto held to be mysterious. It may be asked does any competing theory offer a better explanation, of the unexplained events, whose inexplicability is deemed fatal to the doctrine of evolution.

The origin of life is certainly not satisfactorily accounted for by any theory We may believe that life never began, that it is eternal, but science only encourages the belief that as far as we know life has always arisen from antecedent life, and its origin will or will not remain a mystery.

No other theory has given a semblance of reason to its account of the origin of variation. While the transition of species cannot perhaps be demonstrated, it can be most reasonably inferred under evolutionary doctrine. Atavism may account for much in the way of variation, and the physiologist and pathologist gain from their investigations a conception of reversion which is suggestive of close analysis.

The evolutionist may reasonably admit that the origin of mind is unaccounted for by his theory, as it is by all others. He is just as free, as the believer in other hypotheses, to assume the existence of eternal mind or eternal matter. Evolution deals not with origins, but with processes, and the flood of light it has already thrown upon obscure and incomprehensible problems proves that even as an hypothesis it has not outgrown its utility. As a scientific fact its truth, while not possibly capable of actual demonstration, is daily a matter of increasing inference.

EDITORIAL BREVITIES.

MARAGLIANO'S CURE FOR TUBERCULOSIS.

DOCTOR MARAGLIANO's paper on "The Cure of Tuberculosis by the Use of Antituberculous Serum" was the medical event of Europe this year. Some dissatisfaction was expressed at the vagueness which characterized the author's description of his serum. This, it is understood, has now been removed, and the author's views are found entirely accessible to his compatriots.

THE RECRUDESCENCE OF SUPERSTITION.

A GENTLEMAN named SCHLATTER, who hails from Long Island, is now starring in the west as the "Messiah." He works miracles, cures disease, and does other thaumaturgic feats. Crowds wait upon him. In Denver a large multitude waited upon him and felt rewarded if they but touched the hem of his garment. The credulity of his followers seems equal to those who, in days past, followed the promptings of any fanatic. Sociologically any paranoic seems sure of a good following. An article appearing in a current number of a monthly magazine intimates that superstition, especially in healing matters, is by no means on the wane. Facts, on this side of the Atlantic, show that the cultured races of the west are as apt to fall victims to credulity and imposture as the most unlearned and effete peoples. Yet we progress.

THE LATE THOMAS KEITH.

THE death of DOCTOR KEITH removes from the ranks of the active professio another of the great names connected with abdominal surgery. His first ovariotomy was performed in 1862. A workman asked KEITH to look at his wi who had a tumor. He told the patient that the operation of ovariotomy wa nearly always fatal, that he had never seen it performed, but that he was willin to try. The patient was willing to run any risk, and the tumor was removed, th case being complicated with double pleurisy and a rupture of the cyst. The hu band was kept up most of the night boiling the water which was to be used and one large sponge was inserted into the abdominal cavity once. In this case KEITH laid the foundation of his success. Chemical cleanliness was aimed at, and the importance of having the peritoneal cavity dry was recognized.

PARESIS AS A MICROBIC DISEASE.

IN a study of one thousand three hundred cases of paresis, DOCTOR L. C. PETTIT, of New York, reviews the ordinary history of this disease. Notwithstanding its varied semeiology he considers it a disease marked by a characteristic uniformity in its morbid processes, especially in its earlier stages. The later stages he considers panoramical, a picture but not a representation of what has preceded. As only a small percentage of paretics die in the extreme stages of the disease, the autopsies only afford opportunity for the pathologist to explore the ruins left after the operation of the active pathological cause. The uniformity of the active stages of the disease in all subjects lead one to look for a common cause, and this it is suggested must be microbic.

MEDICAL NEWS.

THE SAGINAW COUNTY MEDICAL SOCIETY.

THIS is a flourishing organization of prominent physicians in the Saginaw Valley. Its deliberations are conducted under the presidency of Doctor J. L. McLaren, while the duties contemplated in the arrangement of a meritorious program devolve upon Doctor S. C. J. Ostrom. The society convenes monthly, and many excellent papers are presented and discussed during the year. At a recent meeting The Physician and Surgeon was unanimously adopted the official organ of this body, and the first installment of its material will be published in our December issue, the paper being upon the subject of "Rectal Ulceration," by Doctor Samuel E. Campbell.

AN AGED PRIMIPARA.

CALIFORNIA has long been noted as a Mecca for prolonging human life. The virtues of its salubrious climate have been recounted with a persuasiveness that seems to have convinced beyond peradventure. Now, however, comes a really extravagant declaration from the slope to the effect that a primipara has reached the four-score mark. A physician down in San Diego recently "discovered *a primipara eighty years of age;* discovered accidentally while endeavoring to pass a catheter." This startling quotation must not be credited to a newspaper report as it was published in an Eastern medical journal of national repute. Verily, in California we have the golden gate!

A DEVICE TO FACILITATE OPTICAL EXAMINATIONS.

DOCTOR J. THORINGTON, of Philadelphia, has introduced a bracket for test cards employed in optical examinations. It is made in two parts, that is, one small piece of polished oak board to each end of which is screwed a vertically placed brass socket; the other, a brass rod curved to a half circle and one inch of each end bent down to a right angle so as to fit evenly in the sockets on the board. From this description it will be seen that the bracket can be fastened to any convenient flat surface by means of screws passing through the oak. The cards are easily adjusted by raising one end of the rod out of the socket and slipping it through the round opening in the card. It possesses the following points of merit: (1) Many cards may be hung one over the other. (2) The cards are always in place. (3) There is no taking down or hanging up. (4) The cards do not become soiled, bent or broken. (5) When it is desired to change cards, all that is necessary is to turn the upper card on the rod, toward the left.

THE NU SIGMA NU.

THE Alpha Chapter of the Nu Sigma Nu Fraternity held its semi-annual initiatory banquet at the Armory, Ann Arbor, Friday evening, November 8. A large class received the degree of Nu Sigma Nu. An addition to the chapter house being found necessary a subscription paper was passed among Alpha members present and about three thousand dollars were raised for this purpose. The University of Michigan faculty fraters each contributed a large sum followed by Alpha alumni and undergraduates seated around the banquet table. The Alpha is one of the most prosperous of the many chapters of the fraternity. The faculty members take a very active interest in the success of the chapter as well as the alumni members.

A MACHINE FOR MAINTAINING PERPETUAL LIFE.

FOR centuries people have laughed at the individual who labored to invent a machine that would evolve perpetual motion. Recently an Ypsilanti man solved the perplexing problem, and inspectors looked askance and wondered whether the wheel really went round, or whether they were hypnotized. For a time this marvellous achievement was regarded the acme of inventive genius, but by-and-by another benefactor emerged from the mechanical laboratory intent upon exciting the populace to still greater astonishment. Auguste Theiss now announces the invention of a machine for maintaining perpetual life! We do not know anything about the construction of this apparatus, but will wager a year's subscription that it is propelled by a crank. After a protracted series of experiments the inventor discovered that life yields to extinction because the caloric molecules become unruly and assume a frigid condition, hence his extraordinary machine is ingeniously devised with a view to keeping the vital forces in line, thereby retaining the necessary degree of temperature to afford perpetual life. Unquestionably Theiss device will prove a boon to mankind.

THE DEATH OF DOCTOR BATTEY.

DOCTOR ROBERT BATTEY, of Rome, Georgia, died on November 8, after a lingering illness. The doctor was born on November 26, 1828, in Richmond county, Georgia, and received his education at Augusta, Georgia, and Andover, Massachusetts. He studied medicine at Booth's Laboratory, in Philadelphia, the Philadelphia College of Pharmacy, the University of Pennsylvania, and Jefferson Medical College, graduating from the Philadelphia College of Pharmacy on March 17, 1856, and from Jefferson Medical College on March 7, 1857. After receiving his medical degree he began practicing in Rome, where he had resided since 1847. In August, 1872, he originated and performed what is known as "Battey's operation," the most notable feature of his professional career namely, the election of ovariotomy "with a view to establish at once the change of life for the effectual remedy of certain otherwise incurable maladies." In November, 1872, he removed to Atlanta to assume the Professorship of Obstetrics and Gynecology in the Atlanta Medical College, filling this position for three years, during which time he graced the editorial tripod of *The Atlanta Medical and Surgical Journal.* In 1875 he returned to Rome and erected his Infirmary for the Treatment of Women, which has been successfully conducted to the present time. He devised and successfully employed an improved apparatus for operating upon vesico-vaginal fistula; discovered that water introduced by the rectum may be readily passed in the living body, the patient being etherized, throughout the alimentary tract to the mouth; devised a new method of treating clubfoot by carved wooden splints and roller bandage; and performed many difficult surgical operations. In July, 1861, he was commissioned surgeon in the Confederate army, and served in this capacity until the close of the war. He was a member of various medical societies and a contributor to numerous medical journals.

A KNIFE FOR USE IN NASAL SURGERY.

A NEW nasal septum knife has been introduced by Doctor Samuel Goldstein, of New York: "The knife consists of a staff, at the proximal end of which is a ring for the thumb; near its distal extremity the staff is made wider and perforated. The perforation is of such size and shape as to allow it to pass over growths of any kind usually seen on the septum. Below this perforation is a slit, to allow the passage of the blade of the knife, which has perfect freedom of motion in two grooves, one on each side of the staff. The cutting edge of the staff is convex, very sharp, and so curved as to fit around the growth, before it is pushed forward in the act of cutting; the two ends of the knife are blunt, in order the more surely to avoid any damage to the mucous membrane of the parts not included in the growth. There are two rings on the staff, one on each side, for the index and middle fingers; these rings allow the operator to keep a firm hold of the instrument, when in position over the growth that is to be removed. The thumb-ring at the proximal end of the staff is fastened by a screw, so that it can be removed when taking the instrument apart. The purpose of making this ring detachable is to allow the blade of the knife to be easily pushed forward, efforts to such measures as may be supposed to be calculated to affect favorably the morbid structures."

CONCERNING PHYSIOLOGICAL FUNCTIONS.

THE International Congress of Physiologists convened in Berne, Switzerland, on September 9. A feature of the occasion was a dog from which the spinal cord had been removed from the middle dorsal region downward. The excision was performed at three different operations during a period of one and one-half years. The last procedure had been survived two years, during which time the canine had retained control of the sphincters of the bladder and rectum, and continued to multiply and replenish its species by giving birth to a litter of pups. There was a muscular degeneration below the line of the lesion, however. Doctor Jacquet, of Basle, read a paper on "The Influence of Cold Baths on the Circulation in Fever," in which he stated that in fever the red blood-corpuscles disappear from the systemic veins and collect in the loin and abdominal veins, and that the cold baths prevent this corpuscular maneuvre, while antipyrin offered no resistance. Professor Mosso read a paper on "Respiration and Circulation in Man at High Altitudes," in which he stated that investigations made at a height of 15,000 feet demonstrated that during repose, respiratory exchange is less. Doctor Demoor, of Brussels, showed that an anatomical change ensues in the processes of the cortical nerve-cells after the ingestion of a strong dose of morphine or chloral hydrate. Professor Herzen, of Lausanne, read a paper in which evidence was introduced to show that the spleen exerts an important influence in pancreatic digestion. Professors Hürtle and Mosso exhibited a new apparatus for measuring the blood pressure in man. Doctor Bowditch, of Boston, was elected one of the presidents.

THE RAILWAY SURGEONS.

An International Congress of Railway Hygiene convened in Amsterdam on September 20. Its deliberations dealt with the hygiene of railway and marine travel. Eyesight and hearing were the principal topics discussed, and there seemed to be a unanimity of opinion that the railway employé should have at least one ear possessing normal acuteness. A number of important papers were read, dealing with the question of medical aid on railway trains, and other topics were considered in papers on "Overwork," on "Traumatic Hysteria," and on "Disinfection of Stations and Restaurants." The congress had its inception in certain Dutch officials, and its participants were chiefly from Holland and England. There is an excellent field in this country for an organization that might be designated the "American Association of Railway and Marine Hygiene."

A THREAT AGAINST PHYSICIANS.

At the recent meeting of the American Pharmaceutical Association the propriety of physicians dispensing medicines was considered in the Section on Commercial Interests. Mr. George Seabury, the leading member of the firm of Seabury & Johnson, delivered an address in which the following threat was incorporated: "Should allopathic physicians persist in following the methods of their homeopathic brethren we have our remedy; another year added to our college curriculum would finish our education solidly for the professions of medicine and pharmacy; we could then favor our medical friends with an answer to the printed card previously mentioned, and have it read: 'Medical advice free; we charge only for the medicine.' What is sauce for the goose is sauce for the gander. If we are forced into this position provided with facts, I believe every state government would amend our charters to include a full medical course, making it a four years' course, the same as it is in our most advanced medical colleges. We could easily complete this course and be better prepared than the average physician on account of our practical training as pharmacists."

INTERPROVINCIAL MEDICAL REGISTRATION.

The profession in Canada have been dabbling with this vexed question for nearly thirty years. At the recent Kingston meeting of the Canadian Medical Association a committee, which was appointed one year ago to devise plans for effecting the desired uniform standard of registration, submitted the following report: "The committee appointed at the last meeting to look into the question of interprovincial registration would beg to express their regret that by the system which at present obtains, a graduate in medicine entitled to practice in one Province is not free to exercise his functions in all the Provinces of this large but sparsely settled Dominion. That this condition of things prevents the names of medical practitioners in this Dominion being placed on the British register, becoming thereby British practitioners, which the Council of Medical Education of Great Britain has more than once signified its willingness to grant. That with this end in view it is, therefore, most desirable that there should be a uniform standard of matriculation, a uniform standard of medical education, and a uniform method of examination for the whole Dominion. That to effect this purpose, the secretary be instructed to communicate with the various Provincial Councils, before their next meeting, asking that each council discuss the question, and, if possible, appoint one or more delegates to a Dominion Committee for the purpose of adjusting a suitable curriculum and carrying out the suggestions herein contained, and that such committee be requested to forward their finding to each of the Provincial Councils and to the secretary of this association before the next annual meeting."

A NOVELTY IN BUTTONS.

THE mescal button is an innovation in trimming that will find favor among physicians who dress their prescriptions according to the latest therapeutic fad. In design this unique article is circular, in color it reflects a handsome brownish tint, in consistency it is quite hard and difficult of pulverization in the mortar, and in diameter its measurement is about an inch and one-half, while from the stand-point of beauty it is said to completely eclipse the famous Murphy button. It profusely decorates the velvety coverlet to the valley of the Rio Grande in Mexico, and is known in botanical nomenclature as *Antalonium Lewinin*, having been named for Lewin, who first suggested that the button might possibly contain medicinal properties. Two physicians have recently been conducting a series of clinical tests for the purpose of ascertaining the action of the button upon the human organism, and have demonstrated that if one be held in the oral cavity a few moments it will invariably become mellow and then swell, and that if three or four be swallowed the resulting expansion will excite one to believe that he has a bulge on all the intoxicants extant. As soon as the terminal filaments "touch the button" the imaginative centre is stimulated, and the most entrancing effects ensue. Beautiful figures, landscapes, dances, et cetera pass in panoramic order before the optics of the subject with a splendor calculated to win encomiums galore. These peculiar physiological features will undoubtedly render the mescal button especially popular as an ingredient for outing mixtures.

THE WILL OF PASTEUR.

THIS is my testament. I leave to my wife all that the law allows me. May my children never forsake the path of duty, and always cherish for their mother the tenderness she so richly deserves. L. PASTEUR.

AN INSTRUMENT FOR TREATING STRICTURE.

THE electrolyser is a new instrument devised for linear electrolysis in the treatment of strictures in general—those of the uterus, the rectum, the esophagus, and especially the urethra. The inventor is Doctor J. A. Fort, of Paris, and the apparatus presents the appearance of a small whip. It has a long, flexible, slender bougie, in the middle of which a projecting smooth platinum blade (not sharp) is connected with a platinum wire covered with a thin coating of gutta percha. This platinum wire can be put in communication with the continuous current of a battery. The terminal portion of the sound is filiform and serves as a driving bougie, preventing any false passage. Introduce the electrolyser into the canal, press the platinum blade against the stricture and put the instrument in communication with the negative pole of a continuous-current battery, place a metallic plate in close proximity to the diseased part and connect with the positive pole of the battery, allow the electrolytic current to pass until the galvanometer indicates ten milliamperes, and the obstacle is destroyed—generally in about thirty seconds. The instrument acts like a urethrotome, except that the cutting edge is not sharp.

A CURRENT EVENT.

THE American Electro-Therapeutic Association convened in fifth annual meeting at Toronto, Ontario, on September 3, and continued its sessions three days. Michigan was represented on the program by Doctor J. H. Kellogg, of Battle Creek, and Doctor W. J. Herdman, of Ann Arbor, the former contributing "Further Studies of the Physiological Effects of the Sinusoidal Current and a Description of a Perfected Apparatus for Producing Both a Sinusoidal and a Direct or Galvanic Current," and the latter "Alternating Dynamo-Currents in Therapeutics." The following were elected officers for the ensuing year: President, Doctor Robert Newman, of New York; first vice-president, Doctor Holford Walker, of Toronto; second vice-president, Doctor D. B. D. Beaver, of Reading, Pennsylvania; secretary, Doctor Emil Heuel, of New York City; treasurer, Doctor R. J. Nunn, of Savannah, Georgia. Executive Council: Doctors W. J. Morton, of New York City; G. Betton Massey, of Philadelphia; W. J. Herdman, of Ann Arbor, Michigan; Emil Heuel, of New York City; and Wendell C. Phillips, of New York City. The next meeting will be held in Boston.

DENVER AS A HEALTH RESORT.

SCHLATTER, the "healer," is treating over one thousand patients daily at Denver. They begin coming at 2 o'clock in the morning, and array themselves in line for a distance of several blocks. A "cure" is effected while each patient waits. Twenty-five seconds are consumed in working the miracle, during which time the hand of the ailing one is clasped by the "healer," who implores Hygeia to infuse new life into the case. All classes and conditions of people are seeking this religious monomaniac for relief from their infirmities. No charge is made for services. There is nothing unusual respecting the personnel of the "healer," except that he parts his hair in the middle. His long black locks, mixed with gray, are permitted to caper about his shoulders *a la* school-girl fashion. His features are large and portray the Samsonian characteristic rather than refinement and intellect. His moustache and whiskers, which bear a color like unto the hair, are somewhat curly, but whether this peculiarity is a freak of nature, or whether the crinkling is the work of a hair-dresser, report does not say. His hands and feet assert themselves in unmistakable terms, but his nasal protrusion, less fortunate, presents a flattened aspect, and is likewise somewhat twisted, suggesting an injury. His organs of vision consist of deep-set, restless, bright-blue eyes, which are ensconced beneath a brow of considerable height. His whole appearance bespeaks an earnestness of purpose excelled only by the fallacy of his methods. The Saint Louis doctor, of witness-box notoriety, who has been treating one hundred and eighty-two patients daily, has suffered a lamentable depreciation of glory since the début of the Denver fanatic.

MINOR INTELLIGENCE.

KANSAS CITY has a Woman's Medical College.

FORTY thousand patients visited Carlsbad last year.

A DEATH by chloroform is reported from Carthage, Missouri.

IT has been suggested by the Académie de Médicine at Paris that a tax be placed upon corsets.

THE Williamette Medical School has been transferred to Salem, Oregon, and a new faculty chosen.

ONE thousand and twenty deaths occurred from lightning in the United States from 1890 to 1895.

DOCTOR J. W. MORGAN, of Cadiz, Ohio, has been arrested for sending a patient a statement of account on a postal card.

CHICAGO people die of consumption in the proportion of 83.11 per 1000. In Boston the percentage is 164.88 per 1000.

THE New Orleans Polyclinic will have a new building by February 1, 1896. It will be 70 by 72 feet, three stories high.

DOCTOR W. G. GRACE, the cricketer, has been presented with $25,000, the amount realized from the testimonial fund.

THE ESTATE OF DOCTOR WENDELL HOLMES.—The gifted poet left an estate of $112,000, most of which was earned by his pen.

DIPHTHERIA IN PHILADELPHIA.—In spite of antitoxin the death-rate in Philadelphia will not be lessened this year over last.

DOCTOR SMITH, of Groosherz, Baden, is president of the Continental Medical Temperance Association recently organized in Europe.

DOCTOR THOMAS KEITH, of London, recently died, aged seventy years. He was a distinguished gynecologist and abdominal surgeon.

ADMIRERS of Doctor Samuel Hahnemann, the father of homeopathy, propose erecting a monument to his memory in Washington City.

THE late Captain Lang, of Gardenville, Baltimore county, Maryland, bequeathed $300,000 to Saint Joseph's Hospital at Baltimore.

THE Saint Louis College of Optical Science has made its debut to the public. The purpose of this concern is to teach opticians to fit glasses.

THE loss entailed by the recent fire at the University of Virginia amounts to $125,000. The medical department was not specially damaged.

THE new institution at Lapeer for the feeble minded and epileptic has 131 inmates, 91 being males and 40 females. Wayne county supplies 28.

"NEW drugs are added every day," says Doctor Wm. Broadbent, "for the benefit chiefly of those who do not know how to employ the old ones."

DOCTOR M. H. PARMELEE, of Toledo, Ohio, has been appointed Professor of Gynecology and Obstetrics in the homeopathic department of the University of Michigan. This appointment completes the faculty announced in our last issue.

MALARIA is receiving attention from the Académie de Médicine of Paris. A committee has been appointed to investigate the means of combatting it.

THERE are 1,600,000 drunkards in the United States. One person in every fifteen inbibes intoxicating liquors to the extent of producing drunkenness.

HAVANA, Cuba, had 126 deaths caused by yellow fever during September. Ninety new cases occurred during the week ending October 3, with 29 deaths.

DUBLIN, Ireland, is determined to keep pace with modern medicine. The establishment of a pathological and bacteriological institute is now proposed.

THE North Carolina Medical Society has only one female member. Doctor Annie L. Alexander is the poor lone woman, and her membership dates from 1885.

THE New York Health Department has received an appropriation of $498,918 for this year's current expenses. This amount exceeds the allowance of last year by $40,000.

DOCTOR FRANK ALLPORT, of Minneapolis, has introduced a modification of his mastoid retractor. The old instrument had incurved arms; the new one has straight arms.

MEDICAL inspectors are paid $1,000 a year in Chicago. They are required to pass an examination equivalent to that exacted for entrance into the Government medical service.

THE Medico-Legal Society of Jersey City contemplates securing a suitable building for a club-house. It will afford quarters for all the doctors and lawyers of Hudson county.

THE Virginia State Medical Society has admitted Doctor Catherine Runyon to membership. Her initiation marks the advent of woman's entrée into that hitherto conservative body.

THE Boston City Hospital had 8,292 patients last year. The average stay of each patient was 19.5 days, while the average cost was $10.00 per week, making an aggregate of $1,658,400.

THE penitentiary at Columbus, Ohio, was entered by burglars on the 27th of November and the private safe of Doctor Rowles, the prison physician, was cracked and $200 stolen therefrom.

SURGEON-GENERAL J. R. TRYON, of the United States Navy, was honored at the recent Centennial Commencement of Union College of New York by having the degree of LL. D. conferred upon him.

THE subscriptions procured to revive *The Index Medicus* numbered 174 on November 5. If the requisite two hundred are not forthcoming by January 1 resuscitation of the periodical will be abandoned.

ON October 1, 1895, a law became effective in New York which requires that all hospital buildings more than two stories high shall be equipped with outside iron stairways and suitable doorways leading thereto.

DOCTOR R. V. SMITH, a railway surgeon of Cleveland, Ohio, has been sued for alleged malpractice. The plaintiff, who was a railway employé, demands $25,000. He was injured while on duty, and was treated by the surgeon.

THE Hartford Medical Society have purchased a society-building site. The $20,000 bequeathed by Mrs. Mary C. Hunt has been expended for this purpose. The building will be a memorial to this woman's husband, Doctor Ebenezer K. Hunt.

DURING the past month typhoid fever has been epidemic in Washington, six hundred cases having been reported. The outbreak is attributed to the lowness of the water in the wells and in the Potomac river, from whence the city is supplied.

THE Gastroenterological Society is the title of an organization which has been established at Baltimore. It contemplates making investigations along the line of the alimentary canal, and will meet on the third Saturday of each month to compare notes.

THE authorities of the Long Island College Hospital have decided upon plans for the Polhemus Memorial Dispensary. The building will cost $250,000, will be six stories in height, and will be equipped with all the modern appliances for dispensary work.

DOCTOR JOHN TRUAX, of New York, suggests a domestic test for albuminous urine, in alcohol. This can usually be procured in some form in any household. Pour the urine into the tumbler containing the alcohol and white streaks will appear if albumin be present.

DOCTOR H. DUDLEY YOUNG, of Boston, has designed a new nasal saw. "The blade is less than a millimeter thick, three millimetres wide, and about one inch and one-quarter in length, probe-pointed, and attached to a straight handle, which is of metal, nickel-plated."

DOCTOR ALEXANDER J. STONE, of Minnesota, Professor of Gynecology in the Medical Department of the State University, was stumping in Ohio during the recent campaign. He declaimed in behalf of ex-Governor Campbell and the Mosgrove bill for medical education.

THE Hospital for the Insane at Yankton, South Dakota, has adopted the praiseworthy practice of sending trained and uniformed nurses after patients committed to that institution. A similar innovation has been inaugurated by the New York Lunacy Commission.

THE late Mrs. Charlotte C. Gittings, of Baltimore, bequeathed $10,000 to the Union Protestant Infirmary, $4,000 to the Baltimore Eye, Ear and Throat Hospital, and $10,000 to the Church Home and Infirmary for the endowment of a ward of five beds for cancerous patients.

EXPERIMENTS upon the criminals in the jails of Punjab, India, have been ordered by the Governor. Half of the prisoners are to be kept on raw water and half on boiled water, the object being to learn whether the cooked water possesses any influence calculated to prevent disease.

A SAINT LOUIS physician claims to have treated two million cases of insanity during the last thirty years. The doctor volunteered this information while dabbling in expert testimony, and afterward affirmed the correctness of the statement in a medical journal. As a matter of fact there have not been two million cases of insanity in the United States during the specified period.

DOCTOR EDGAR COOLEY, Professor of Physiology in the Barnes Medical College at Saint Louis, recently became a benedict, and the students commemorated the event by presenting him with a beautiful silver tea service and a handsomely-mounted group photograph of the entire class.

THE defect in the resolution of the Association of American Medical Colleges has been considered by the Judicial Council and constituent members have been granted permission to graduate in 1898, students matriculating in 1895 and attending three full courses of lectures of six months each in three separate years.

THE New Orleans Medical Society appointed a committee to investigate Doctor Paquin's serum treatment for consumption. After listening to the report a resolution emphatically announcing non-approval of the alleged remedy was passed, but subsequently the tenor of the judgment was modified to preclude offense.

THE corner-stone of the Pirogoff Anatoma-Chirurgical Musea, to commemorate the illustrious Russian surgeon, Doctor N. N. Pirogoff, was laid on September 14. The building will be a model structure, and is designed for the accommodation of the medical societies, affording apartments for meetings and libraries.

THE Northern Pacific Beneficial Association has rendered its thirteenth annual report. It shows that 14,645 patients have been treated during the past year, 1010 of this number receiving attention at the Brainerd Hospital, and 1024 at the Missoula Hospital, the remaining 12,611 having been under the care of line surgeons.

DOCTOR NICOLAS ILITCH KIRAKOFF recently shot himself in the suburbs of Odessa. An operation performed on a patient for strangulated hernia terminated fatally, and five minutes after the news of death reached the physician the deed was executed. Doctor Marragin, who assisted the operator, testifies that its technique was devoid of error.

KIRSTEIN, of Berlin, has designed an autoscope, an instrument for examining the larynx. It has a handle, an electric light calling for thirty volts, and a spatula covered with a horizontal plate. Its chief advantage over the laryngeal mirror is that it enables one to see not only as much as is shown by the mirror, but also the posterior wall of the larynx.

THE widow of a man who recently died of typhoid fever at Ashland, Wisconsin, has instituted proceedings against the Ashland Water Company to collect $5,000 damages. The corporation is charged with having permitted the water to become polluted by typhoid germs, and the disease from which the husband of the plaintiff succumbed is attributable to this pollution.

DOCTOR HENRY C. COE is the newly elected president of the New York Obstetrical Society. The other officers are: First vice-president, Doctor J. Riddle Goffe; second vice-president, Doctor A. Palmer Dudley; recording secretary, Doctor Arthur M. Jacobus; assistant recording secretary, Doctor George W. Jarman; corresponding secretary, Doctor Robert L. Dickinson; treasurer, Doctor J. Lee Morrill; pathologist, Doctor George C. Freeborn.

At the forthcoming meeting of the Medical Society of the State of New York, which will convene in Albany during the last week in January, addresses will be delivered by Professor William Pepper, of Philadelphia; Professor James H. Etheridge, of Chicago; and President Eliot, of Harvard University. The latter will discourse upon "Medical Education of the Future."

The Doctors' Stable Club is the title of a unique organization recently established in New York City. It contemplates the care of the horses and carriages of its members, and proposes engaging the services of a carriage-maker, a harness-maker, and a horseshoer to repair outfits at a fixed monthly sum. Membership involves an outlay of about thirty dollars a month.

Rome has an organization designated Crosce Blanca, the purpose of which is to care for victims of accidents or the wounded "soldiers of industry." This charitable institution has at its disposal a corps of young men and women who pick up and transport the unfortunates to hospitals, rendering first aid in urgent cases, and functionalizing as attendants or nurses when necessary.

The following is the record of mortality from typhoid fever in Cleveland for the past ten years: In 1884 there were 121 deaths from this disease; in 1885, 71; 1886, 113; in 1887, 120; in 1888, 113; in 1889, 185; in 1890, 182; in 1891, 155; in 1892, 166; in 1893, 153, and in 1894 there were 89. The average annual number of deaths from typhoid fever for the period chosen is hence 145.

Doctor Nannie A. Stevens has instituted proceedings for divorce from Ralph Stevens, a prosperous farmer of Wichita, Kansas, charging, among other accusations in the complaint, that the disagreeable fellow "laid around and would not help her get the meals." The complainant was formerly a prominent member of the Woman's Federation in that state.

Typhoid fever recently occurred in a household several miles north of Cincinnati, the whole family being prostrate. In this instance the water had not lowered in the well, nor had it lost its usual clear and sparkling appearance. In endeavoring to learn the cause of infection the attending physician prepared a pailful of brine and threw it in the privy vault. Within a few hours the water had become too brackish to imbibe.

The Baltimore School Board has resolved to institute an examination of the eyes of school children, two oculists of that city agreeing to render service without pay. Will the teachers now come forward and offer to impart instruction without pay? While the oculists are noting the abnormalities of the pupils' vision it might be advisable to observe the far-sightedness (hypermetropia) of the teachers and contemplate the lesson demonstrated by their keen perception. "The laborer is worthy of his hire."

The Post-Graduate School of Medicine of the District of Columbia has been established in Washington. October 10 marked its inception, and Doctor Samuel C. Busey was elected president of the meeting, which was attended by the following gentlemen: Doctors H. L. E. Johnson, E. L. Tompkins, W. W. Johnston, Samuel C. Busey, J. Foster Scott, H. D. Fry, S. S. Adams, J. Ford Thompson, T. E. McArdle, C. W. Richardson, James Kerr, G. N. Acker, W. H. Wilmer, M. F. Cuthbert, E. M. Parker, G. Wyethe Cook, and George Byrd Harrison.

Professor Leopold Leopoldoritz Lirschman, the venerable and celebrated ophthalmologist, was recently tendered a public jubilee at Charow, in honor of his thirty years' labors. An address was presented to him by the medical society; a life-size portrait of the professor was unveiled in their hall; and a perpetual free bed, dedicated to the great ophthalmologist, was placed in the city hospital for patients afflicted with diseases of the eye.

Professor Raoul Pictet, of Berlin, has established a Kalteklinik for the frigotherapeutic treatment of disease. It is a cold cure, and the originator claims to be particularly successful in freezing out dyspepsia. Experiments made upon himself for relief from that distressing affection resulted entirely satisfactory. By enclosing himself in a refrigerator he reduced the bodily temperature to minus 105° centigrade, and then emerged in a tingling condition and possessed of a ravenous appetite.

The Association of Assistant Physicians of Hospitals for the Insane held their second meeting at the Michigan Asylum for the Insane, at Kalamazoo, on October 24, 1895. The membership of this organization was originally composed of medical officers of staffs of hospitals for the insane in Michigan, Illinois, and Iowa, but at the late meeting the eligibility of assistant superintendents and assistant physicians in all such institutions was agreed upon. The next meeting will occur at Independence, Iowa, in May, 1896.

Doctor Edward Philip Busse, and Doctor Katherine Stuart Snyder were married at Evansville, Indiana, on October 9. The bride is a graduate of the medical department of the University of Michigan, class of 1888, and for several years has been physician at the Southern Indiana Hospital for the Insane, and lecturer in the Training School connected with that institution. She is an amiable woman and a conscientious physician, and it is gratifying to know that in journeying through life she has elected not to walk.

Cork is being advocated as a street pavement in this country. It is already employed for that purpose in some of the principal cities of England, Scotland and Australia. Strictly speaking this designation is a misnomer, for although the blocks consist chiefly of granulated cork, mineral asphalt and other cohesive ingredients enter into their formation. The blocks are imbedded in tar and rest upon a six-inch base of concrete. This combination has many advantages to commend it, among them being cleanliness, noiselessness, durability, elasticity, cheapness, freedom from slipperiness whether wet or dry, and presents a minimum resistance to traction, besides being nonabsorbable and inodorous.

Doctor Hunter McGuire, of Richmond, Virginia, has renewed his offer of a prize of one hundred dollars in behalf of the Virginia State Medical Society for the best essay on "The Status of Serum Therapy." The prize will be awarded at the next meeting of the society, to be held in Danville, during the fall of 1896. Competition is extended to members in good standing of the State societies of Virginia, West Virginia and North Carolina. Doctor Joseph Price, of Philadelphia, and Doctor Herbert M. Nash, of Norfolk, Virginia, offer a prize of three hundred dollars for the best essay on "The History of Medicine and Surgery in Virginia." This prize is to be awarded at the same meeting, and competition is limited to practitioners of Virginia.

At the last meeting of the Tri-State Medical Society (of Iowa, Illinois and Missouri) the following officers were elected: President, Doctor Robert H. Babcock, of Chicago; first vice-president, Doctor A. H. Cordier, of Kansas City; second vice-president, Doctor W. A. Todd, of Chariton, Iowa; treasurer, Doctor C. S. Chase, of Waterloo, Iowa; secretary, Doctor G. W. Cale, of Saint Louis. The next meeting will be held in Chicago the first Tuesday, Wednesday and Thursday, in April, 1896.

A new syringe for treating epistaxis, et cetera has been introduced by Doctor H. L. Armstrong, of Brooklyn, New York. It possesses an advantage over the ordinary syringe in having an adjustable shield which prevents "the water and secretion discharging from the opposite nostril going entirely over the basin, either upon the patient's or physician's clothing or carpet." It has an adjustable and self-lubricating piston, and is put together in sections with screw joints; it also has a postnasal tip.

The New York hospitals have undergone a radical change in the method of selecting staffs. The Commissioners of Charity recently asked for the resignations of the medical and surgical staffs of the four hospitals under their management and have delegated the appointive power to the faculties of the various medical colleges. Only a few old members have been reappointed, and much dissatisfaction is expressed by the deposed. The plan has been in vogue at Bellevue and the excellent satisfaction experienced prompted its inauguration in the other institutions.

Another cure for drunkenness has been announced by Doctor Matchette. This is the method of treatment. The debauch is followed by a hot bath and a brisk cathartic. This procedure is succeeded by hypodermic medication, the sulphate of hydrastine being injected in dosage of one-fiftieth of a grain and gradually increased until the maximum of one-twentieth of a grain is employed four times a day. If the patient is nervous mixtures containing valerian and bromin are brought into requisition. Ninety-eight per cent. of cures are claimed for this treatment.

The ingenious communion service invented by a Grand Rapids clergyman, and described in this journal some months ago, will probably be relegated to obscurity by the recent advent of a method which contemplates sucking the sacramental wine through a silver siphon. The length of the tube is five inches, and its circumference is about the size of the straw generally employed in sucking cider or lemonade. Each communicant will be obliged to possess a siphon, and the individual whose pulmonary capacity affords the greatest suction is assured the biggest drink.

Kissing has been tabooed by the Chicago board of health. Doctor C. F. Reilly has issued a circular recounting the various bacilli that lurk about the lips, and concluding with the declaration that should any weaklings, in an unguarded moment, be so unfortunate as to indulge in the unhygienic practice, strong carbolized rose water ought immediately be applied to the labial mucous membrane to prevent the spread of disease by germ contact. The admonition was ridiculed by the younger members of the community, but a symposium of opinions from physicians endorsed the sentiments of the circular, and now kissing is in danger of being relegated as a lost art.

CONTEMPORARY OPINION.

PRACTICAL METHODS IN MEDICAL TEACHING.

[THE NORTH AMERICAN PRACTITIONER.]

THE old and nearly universal method of imparting medical instruction by means of dreary didactic lectures of an hour each has well nigh passed away. Clinical teaching and practical demonstrations in every department are now almost entirely taking their place. It now seems to us incredible that simply didactic lectures should have usurped and maintained their place so long. It was one of the wisest of procedures, when the immortal Harvey turning from his lectures, and brushing books aside, uttered these memorable words: "Here is a little bit of practical mechanics; let me see how it works." Viewing the result one would imagine that his methods would have commanded a world-wide adoption. Slowly but steadily they have been gaining in favor, until now be he never so eloquent, the orator must make place for the demonstrator. Clinical methods henceforth seem destined to prevail in every department of medical teaching, and students are demanding to see and to know for themselves.

THE LAITY AND MEDICINE.

[THE COLUMBUS MEDICAL JOURNAL.]

THE question of educating the laity on medical and surgical subjects is one with two sides. An ancient writer has said: "A little learning is a dangerous thing." The idea set forth a few years ago that the physician should keep the patient enshrouded in mystery as to the science and practice of his art is fast becoming obsolete. The increased education of the masses, the result of free schools in a free republic, has done much to set aside this idea, which we will concede was a necessity with our forefathers, who practiced largely among ignorant patients, whose education was not sufficient to enable them to comprehend any extended explanations regarding the method of treatment employed. The tendency at present is for the pendulum to swing too far the other way. While we believe that intelligent patients should receive a brief, comprehensive explanation regarding the nature of their disease, and the reasons for a certain line of treatment or an operation, we also believe that it is detrimental to both patient and physician to go into details.

PHYSICIANS WHO READ.

[THE SAINT LOUIS MEDICAL AND SURGICAL JOURNAL.]

PHYSICIANS may be divided into three general classes: those who do not read any medical literature after they have graduated; those who pretend to read; and those who read seriously, and ponder over what they do read. The first class needs no consideration at our hands. The physician who does not read medical journals at least is like the layman who never looks at a newspaper. He is simply out of his world, and not of it. In the *argot* of the street, he is a "back number;" and, as the late Lord Dundreary would have said, he is forced to "flock by himself." With regard to the second class, we have here the attempt made to accomplish the impossible, backed by the further assumption that it is done. This is the class whose medical reading is strictly confined to reading the titles of papers in medical journals, and of books on their backs. From this preliminary reading, many learned opinions and forcible interviews evolve, to the edification of more or less admiring hearers. Still even these readers will stop at times to read an entire article; and they have acquired sufficient discrimination to read the work of some one competent to write a good article. This leads to an increased appetite for such pabulum; so that, on the whole, much good comes out of even such superficiality as is apparently displayed. Finally, we have the physician who reads, and who thoroughly digests what he does read. In this class we will find those whose library is limited to a few standard text-books, and a medical journal or two which are received with regularity. They are conscientious readers; and, albeit they limit their excursions in the field of medical literature to narrow limits, they make it a business to thoroughly post themselves as far as they go; and they thus become well posted upon the practical points which they are called upon to utilize in their daily practice. While the more theoretical parts are perhaps not so well acquired, they manage to obtain a fair inkling of them by means of their medical journals, and often are thus encouraged to pursue a number of subjects to a more satisfactory conclusion.

The physician who reads most, and who is ever doing so, is the one who writes and who teaches. With him it is a prime necessity to do so, in order that he may ever be abreast of the times, and posted, not only upon a particular subject or branch, but upon the various advances being daily made in the broad domain of medicine and surgery. He is a large buyer of books and journals, and the more languages he is acquainted with the greater reader he becomes. He becomes a prolific writer, because he unconsciously becomes a quick and rapid observer, as well as an accurate one; and discoveries are continually presenting themselves, as well as the contemplation of old things in a new light. We would advise all physicians to become greater readers of sound medical literature, and not the least part of which is first-class medical journals. Do not depend upon one journal to supply all the medical literature extant, for that is simply expecting the impossible. A few well-selected ones, however, will furnish all the principal medical news of a useful nature. The library should also be added to from time to time in the way of good, reliable works, to replace many which are out of date and have served their usefulness.

Were such a plan adopted, we would soon have a reading, working profession, which would be appreciative of the work of the few to a greater extent, and would itself profit to an extent not conceived of before. The plane of medical education would, of a necessity, be on a higher level, and would lead to its encouragement as well as adoption by those who undertake to teach.

RECENT PUBLICATIONS.

REVIEWS.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS.*

THE fact that the fifth edition of "Hare's Therapeutics" has been demanded within a period of five years bespeaks the high appreciation entertained for the work by the profession. In the volume under consideration the author has revised each article, many valuable suggestions have been added, and several portions entirely rewritten. For the purpose of associating a knowledge of remedial agents with a knowledge of disease these two divisions are embraced in the work, the first being a treatise on therapeutics, medicinal and nonmedicinal; and the second being an investigation of disease, its symptoms and treatment. The book is arranged alphabetically, and the two parts are brought into direct communication by references which greatly facilitate access.

*A Text-Book of Practical Therapeutics; with Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Doctors G. E. de Schweinitz, Edward Martin and Barton C. Hirst. New (fifth) edition, thoroughly revised. In one octavo volume of 740 pages. Cloth, $3.75; leather, $4.75. Philadelphia: Lea Brothers & Company, Publishers.

THE PRINCIPLES AND PRACTICE OF MEDICINE.*

This is the second edition of "Osler's Practice," and the reputation of the author will unquestionably insure the work a hearty reception. A number of additions and changes are apparent in the present volume. Turning to the section on specific infectious diseases it is seen that the dessertation on typhoid fever discloses evidence of thorough revision to date. The articles on malarial fever, diphtheria, septicemia, and pyema have been, respectively, rewritten, extended, and rearranged and revised. Modifications are noticeable in the essays on tuberculosis, syphilis, and cholera, while the description of gout and diabetes is somewhat extended. Affections of the mesentery have been regarded of sufficient consequence to be discussed in an independent section. A new introductory section has likewise been written on diseases of the nervous system, the text being elucidated by diagrams especially valuable to the student. The section on parasites has been entirely recast, and a careful revision of the nomenclature effected in accordance with the system of the International Committee. In fact the whole scope of the work has been more or less emendated and brought in harmony with the more recent ideas of medical practice.

*Designed for the Use of Practitioners and Students of Medicine. By William Osler, M. D., Fellow of the Royal College of Physicians, London; Professor of Medicine in the Johns Hopkins University, and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore; formerly Professor of the Institutes of Medicine, McGill University, Montreal, and Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia. Second edition. New York: D. Appleton & Company.

THE STANDARD DICTIONARY.*

The most gigantic task ever undertaken in the making of dictionaries of the English language has been brought to a successful issue by the recent publication of the "Standard Dictionary," by Funk & Wagnalls, of New York. The time spent in its preparation covered a period of five years, and the entire cost reached nearly a million dollars. There were 247 editors and specialists engaged in preparing the work, each selected from the front rank of English and American scholars, and each a recognized representative of the matured and advanced thought in his own special field of research. Some idea of its comprehensiveness may be gained from the fact that by actual count the number of vocabulary terms in "Webster's (latest) International Dictionary" under the letter "A" is 8,358; in the "Century Dictionary," 15,621; while in the "Standard" it reaches the marvelous number of 19,736. Further, the number of vocabulary terms for the entire alphabet in these three dictionaries is stated to be as follows: "Webster," 125,000; "Century," 225,000; "Standard," 349,333, including the appendix, which contains 47,468 terms.

The work comprises two volumes, aggregating 2,338 pages, three columns to the page, the first of which has 1,060 pages, the second 1,278; and in binding, illustration and typography is a model of rare beauty and excellence.

The distinguishing features of this mammoth work will be considered in our next issue.

*The Funk & Wagnalls Company, 30 Lafayette Place, New York. Isaac K. Funk, D. D., Editor-in-Chief. Sold by subscription only. Prices $12 to $24, according to binding. The Fuller Company, Kalamazoo, Michigan, General Agents for Michigan, Ohio, Indiana, Illinois, Wisconsin, Minnesota and Iowa.

OBSTETRIC SURGERY.*

THE announcement is made in the preface that this useful manual has been written from a teaching basis, and is therefore necessarily imbued with the personality of the authors. It is a compact treatise scientifically dealing with the various surgical procedures peculiar to obstetric practice. It is not burdened with literature references or statistical data, and hence will afford the obstetrician ready access to special technique.

*By Egbert H. Grandin, M. D., Obstetric Surgeon to the New York Maternity Hospital, Gynecologist to the French Hospital, et cetera; and George W. Jarman, M. D., Obstetric Surgeon to the New York Maternity Hospital, Gynecologist to the Cancer Hospital, et cetera. With eighty-five illustrations in the text and fifteen full-page photographic plates. Royal octavo, 220 pages. Extra cloth, $2.50, net. Philadelphia: The F. A. Davis Company, 1914 and 1916 Cherry street.

MEDICAL PROGRESS.

MEDICINE.

LATENT TUBERCULOSIS OF THE THREE TONSILS.

DIEULAFOY (*Bull. de l' Acad. de Méd.*, April 30th, May 7th, 14th, 1895) has made an experimental investigation to ascertain whether hypertrophy of the tonsils and adenoid vegetations of the pharynx are in any cases of a tuberculous nature, and, if so, in what proportion. He obtained from various hospitals in Paris, but chiefly from the Hôpital des Enfants, a number of portions of tonsils and of adenoid vegetations which had been removed on account of overgrowth. Hypertrophied tonsils from sixty-one cases were inoculated into guinea-pigs, and eight of the animals became tuberculous; adenoid vegetations from thirty-five cases were inoculated, and seven of the guinea-pigs became tuberculous. Thus, one in eight of the cases of apparently simple hypertrophy of the tonsils and one in five of the cases of apparently simple adenoid vegetations were in reality tuberculous. Dieulafoy points out the bearing of these experimental results on the production of general tuberculous infection through the throat. He seeks to distinguish three stages in the history of such cases. The first is that of latent tuberculosis of the three tonsils, during which the bacillus, having become established in the lymphoid tissue of the pharyngeal or of the two other tonsils, causes a multiplication of phagocytes and a greater or less enlargement of the organs. After some months or years the phagocytes may get the upper hand, much fibrous tissue is formed, and the tonsils shrink without any extension of the tuberculous process beyond them. Frequently, however, the infective microbe reaches the lymphatics of the tonsils, and passes to the lymphatic glands in the submaxillary and cervical regions. The enlargement of these glands constitutes the second stage. The glands involved may be few in number and may subside after a time; on the other hand, the process may extend from group to group, descending from those in immediate relation with the tonsils to both the superficial and deep cervical glands. Frequently an attack of scarlet fever, measles, whooping-cough, influenza, or syphilis appears to be responsible for a rapid extension of the infection of the glands, and for their suppuration. The third stage recognized by Dieulafoy is that of infection of the lungs. This he believes to take place by gradual extension in continuity through the lymphatics, until either the thoracic duct or the right lymphatic duct is reached. From here the bacillus is carried to the right side of the heart, and finally to the lung. The first evidence of its presence in this situation may be hemoptysis (the "defensive hemoptysis" of Dieulafoy). The interval between the second and third stages may vary from a few months to several years—even, Dieulafoy believes, as many as sixteen years. The fact that the pharyngeal tonsil is found to be more frequently the seat of chronic tuberculosis than the palatine tonsil confirms the view, rendered probable by Strauss' observation that the bacillus tuberculosis can easily traverse the nasal passages, that this form of tuberculosis of the pharyngeal structures owes its origin more commonly to infection derived from the air inspired than from the food ingested. In infants predisposed by heredity to tuberculosis special care should be taken to remove them from domestic relations with persons suffering from pulmonary phthisis, or at least to disinfect the sputa, and to see that the milk is from a safe source. As to treatment, Dieulafoy relied mainly on the introduction of much fat into the diet—cod-liver oil, sardines, butter—and on sea air. At the marine hospital at Berck enlargement of the cervical and submaxillary gland disappeared in nine hundred out of 1,293 cases treated. The reading of the paper was followed by a long discussion, in the course of which Cornil criticised Dieulafoy's conclusions on two grounds: (1) That the histological examination of adenoid vegetations from seventy cases, made in most instances under his own supervision, showed evidence of tuberculosis in four only, and that not once in the course of the histological examination of a very large number of hypertrophied tonsils had he found giant cells or other evidence of tuberculosis; (2) that inoculation experiments were open to the fallacy that tubercle bacilli entering by the mouth or nose might be entangled in the mucous lying in the anfractuosities of the adenoids or in the crypts of the palatine tonsils. In this way tuberculosis might be produced in the guinea-pigs by the inoculation of portions of adenoid vegetations or tonsils which were not really infected with tuberculosis, though active tubercle bacilli existed on their surfaces.—*The British Medical Journal.*

THE TREATMENT OF INTERMITTENT FEVER.

Before the discovery of the tubercle bacillus, many a cough was allowed to continue without treatment and the real difficulty not suspected until a sharp hemorrhage or a hectic fever revealed the true situation. Only a few months ago diphtheria patients walked the streets with a simple sore throat, while cases of follicular tonsillitis were carefully treated as diphtheritic in character. Nearly all of us were taught that malaria was an earth-born poison which filled the air with "a fever-generating agent."

Now, all this is changed. The tubercle bacilli can be detected in the earliest stages of phthisis. The Klebs-Loeffler bacillus decides the presence of diphtheria; and the malarial germs of Laveran tell us we have an intermittent fever.

It is natural that we look for a remedy which will destroy these germs or counteract their poisonous products. Indeed, it now appears that we have, unconsciously to be sure, been giving a perfect specific for the cause of the latter disease. Quinine is no longer administered in an empirical manner. We know precisely why we give it and what it does. Quinine exerts a deathly influence over the malarial germ, therefore it may be given with the satisfaction of knowing that it will invariably check the paroxysms of an intermittent fever. If its use is not followed by this cure, then it is certain that it never came in contact with the red corpuscles of the blood, absorption was incomplete or the quantity of the drug was insufficient. In the light of all this it is certainly bordering on the ludicrous that the "National Dispensatory" should give a list of seventy-six remedies in the index under "Intermittent Fever."

The patient has usually had a malarial paroxysm before seeking medical advice. As hepatic activity is necessary to obtain the best effect of the specific treatment, so, in cases of constipation at least, it is better to begin the treatment with the following prescription which should be taken five or six hours prior to the quinine:

℞ Hydrargyri Chloridi Mitis,
Sodii Bicarbonatis, ... āā gr. j.

Misce. Divide into six powders. Signa—Take one powder every fifteen minutes, using all the powders.

This is far preferable to giving the calomel in one single dose and in larger quantity. However, it may be necessary, if the patient is insensitive to purgatives, to increase the quantity in the prescription by one-half. While this preparatory treatment is not necessary, yet it is certainly true that after its employment a less quantity of quinine is required and the general condition of the patient is improved.

It has been stated that this treatment should be given five or six hours before the specific treatment. It should now be said that the latter treatment is best inaugurated at such a time that it will be exerting its fullest physiological action when the next paroxysm is due. This time can be quite accurately stated when we remember that a paroxysm often begins an hour earlier than the preceding one and that about three hours are required for the quinine to be in its most active condition in the body.

To insure prompt and complete absorption the quinine is best given in liquid form. The following is a favorite prescription:

℞ Quiniæ Sulphatis, ... grs. xv.
Aquæ, ... ℥j.
Acidi Sulphurici, dil. q. s. ft. sol.

Misce et Signa—Take in one dose in one-third glass of water.

With the above preparatory treatment and with the quinine dissolved, this dose is equivalent to at least twenty grains given after the usual manner; while it is certain we should not trust to pills or capsules at such a time unless we know positively that these are in a perfectly soluble condition.

To prevent the uncomfortable head symptoms which accompany full doses of quinine, and also to relieve the pain which is likely to be present at the same time of the expected paroxysm, the following prescription should be given four or five hours after the specific:

℞ Antikamnia tablets (5 gr. each), number xxiv.

Signa—One tablet every two hours while pain necessitates.

While the above dose of quinine is sufficiently large for residents of most parts of the United States, yet in some of the Southern states and in other sections where malaria abounds with unusual force, it may be necessary to give the quinine as high as twenty, forty, or even sixty grains. But in the great majority of cases the above single dose will be sufficient to prevent a second chill.

In order that there may be no question about the recurrence of an attack, and also in order to bring the system under the influence of a good tonic, the quinine should be continued for one or two weeks in doses of five to ten grains a day. As the malarial germ has left its effects on the nervous system, and often to a marked degree, so a remedy is indicated which will put at rest the disturbed condition. The following will be found satisfactory in every way:

℞ Antikamnia and Quinine tablets (5 gr. each), number xxiv.

Signa—One tablet three times a day after meals. This tablet contains two and one-half grains of sulphate of quinine and two and one-half grains of antikamnia, being the most desirable proportion.

If the physician be called while the patient is suffering from a paroxysm, and he is in doubt as to its nature, he has only to remember that any intermittent fever which resists the action of quinine is not necessarily of malarial origin. Even during the chill of a malarial attack the temperature may rise to 102° or higher, while it is often true that when the chill has passed and the fever is on, the thermometer will show a lower degree of heat. Therefore, no better treatment can be given at the beginning of or during the chill, than the following:

℞ Antikamnia tablets (5 gr. each), number xxiv.

Signa—Take two tablets immediately. Repeat dose in two hours if pain necessitates.

The antikamnia will relieve the congestion of the abdominal and thoraci organs and will materially alleviate the headache of the second stage especially. In fact, it practically robs the fever of its most distressing features.

When we consider that the cause of intermittent fever is so thoroughly understood, and that quinine is regarded as its specific, destroying said cause how puerile are all attempts to bring forward new substitutes. Although pai

may not be dependent upon any special living organism, yet it is certain that in antikamnia we have a most reliable specific.

In regard to the treatment of all forms of febrile maladies, periodic or continued, I have found the antikamnia tablets with its various combinations of codeine, salol or quinine (as indicated in each individual case), the most reliable, prompt and satisfactory remedies in controlling these intractable disorders of any remedial agent known to me in a general active practice of over thirty years. —Walter M. Fleming, M. D., 240 Fifth avenue, New York City.

SURGERY.

THE TREATMENT OF SPRAINED ANKLE.

Gibney contributes to *The New York Medical Journal*, Volume LXI, Number VII, a method of treatment that he says involves no loss of time, requires no crutches, and is not attended with any ultimate impairment of function. The method is as follows: A number of strips of rubber adhesive plaster of twelve inches in length and appropriate width are prepared. For a sprain about the external malleolus the first strip is applied, beginning at the outer border of the foot near the little toe and ending on the inner side of the foot about its middle just under the planter arch. The second strip is applied vertically, and passes from about the junction of the middle with the lower third of the leg. down along the side the tendo-Achillis, over the heel, and terminating at a point just above the internal malleolus, but posterior to it. The remaining strips are applied in the same way, each one overlapping the last about one-half of its width, until the whole external malleolus and side of the foot up to the middle third of the leg are covered. It is well to reinforce just under the malleolus by strips passing criss-cross so as to give additional support to the injured part. Care should be taken not to completely encircle the ankle, which might cause injurious compression. For sprains of the tarsal or midtarsal joints or other parts the adhesive plaster is to be applied in the same manner, the idea being to give support to the part.—*The American Journal of the Medical Sciences.*

A NEW DRESSING FOR CIRCUMCISION CASES.

Three triangles are cut of lint, the base of each being about six inches in length and the sides about eight inches. In the centre of each triangle is cut an aperture sufficiently large to admit the glans penis being forced through it. Should erection occur from irritation of the parts or other causes, the lint will give a little so that there is no danger of strangulation of the blood supply. From a two-inch roller bandage, preferably of muslin, as that material can be applied more smoothly, three strips are cut, one thirty-six inches and each of the others eighteen inches in length. These are used as straps to keep the dressing in place. From rubber protective is now cut a triangle similar to those already cut from the lint, but with a slightly larger central aperture. Have at hand a few medium sized safety pins and a dusting bottle of iodoform.

The mode of procedure is as follows: The parts are first dried, then dusted with iodoform. Pick up one of the lint triangles with the left hand; with the right hand force the glans penis through the central aperture until the corona glandis is passed, applying the triangle so that the base will be superior and the apex inferior, while the rough surface is posterior and the smooth anterior. Over the anterior surface pour melted zinc oxide ointment, care being taken that it is not hot enough to scald. The second and then the third triangle are applied in the same manner as the first and also covered with melted zinc oxide ointment. The triangle of protective is then applied to prevent soiling the lint dressing by the urine. To the combined right lateral angles of the triangles one end of one of the eighteen-inch strips is fastened by means of a safety-pin, the other eighteen-inch strip being fastened to the combined left lateral angles. The center of the thirty-six inch strip is fastened to the combined apices of the triangles. The strips should be applied smoothly and tightly in the following manner: Those coming from the lateral angles are carried directly around the body, crossing at the small of the back, and terminating just above the anterior superior iliac spine of the side opposite the angle to which their initial extremity is fastened. One-half of the double strip attached to the combined apices is passed around the posterior surface of the right thigh close up in the gluteal fold, then on around the thigh, across the anterior surface of the abdomen to end above the left anterior superior iliac spine. The other half is passed in a similar manner around the left thigh and across the abdomen to end above the right anterior superior iliac spine. The strips terminating above the right spine are now pulled snug and pinned, then those of the other side are treated in a similar manner.

This form of dressing is especially useful in children, as it is not readily soiled, is easily applied and removed, and will remain in place, serving its purpose of keeping back the foreskin, however much the child may toss and roll. —R. S. Fowler, M. D., in *The Brooklyn Medical Journal.*

GYNECOLOGY.

LESIONS OF THE FEMALE GENITALIA PRODUCED DURING COITUS.

THIS subject is of importance from a medico-legal as well as a gynecological standpoint. The hymen may remain intact after coitus either because the male organ has not penetrated the vagina, or when the solidity of the hymen or narrowness of the vagina from imperfect development prevents intromission, or in cases which present a very elastic hymen with a large opening. Usually during the first union this organ is ruptured by a single blow, the line of tear being single, double, or radiating from the opening; more rarely the hymen is torn away at its attached margin and remains hanging by one side. In violent intercourse, especially when the hymen is annular and thick, the tear may extend into the vaginal wall. The hymen is not merely a fold of mucous membrane, but contains muscular tissue and may be well supplied with blood vessels. As a rule the hemorrhage following its rupture is slight and soon ceases; if serious the bleeding vessels should be tied; if parenchymatous a tampon is effectual. The tear usually heals in two or three days, but acute inflammation may arise from infection of the wound or too frequent coitus.

Laceration may occur in the region between the clitoris and the meatus urinarius, or severe hemorrhage may be caused by rupture of the turgid blood-vessels of the neck of the uterus. Improper formation of the hymen, malposition or diminutive size of the genital opening, and abnormal position or violence during coition may lead to rectovaginal fistula.

The author believes that vesico-vaginal fistula due to coitus is almost an anatomical impossibility, even in a short vagina, as the penis never enters entirely when in the natural position. A distended bladder might be thought to aid in the production of such a fistula, but it presses the uterus backward and upward, thus lengthening the vagina and stretching its anterior arch, and the only possibility is the detachment of the anterior fornix from the uterus. Lesions of the upper part of the vagina do not occur if it is healthy and of normal elasticity and extensibility, despite the relative size of the male and female organs and the violence of intercourse, except occasionally when in an unnatural position. In the author's two cases the pathological condition was furnished in one by atrophy associated with the climacteric, in the other by chronic atrophic parametritis.

Intercourse by the urethra occurs only in cases of atresia hymenalis when it is *locus minoris resistentiae.* Usually in this case the urethra is slowly dilated by persistent efforts, but rapid dilatation may result in its rupture.—Y. Lvow, in *The American Journal of Obstetrics.*

OBSTETRICS.

TWIN LABOR: PLACENTA PREVIA CENTRALIS.

Kahn (*Saint Petersburger Med. Woch.*, Number XVI, 1895) relates a very complicated labor. The patient was twenty-three years old. She had borne one child. Her last period was in May, 1894. Three floodings occurred. On October 30 Kahn found her very anemic. The uterus reached to the umbilicus, and was contracting; fetal heart sounds were audible; the placenta was presenting. At 11 p. m., severe hemorrhage having come on, in spite of hot irrigations and the tampon, delivery was hastened. The os already admitted three fingers. In attempting to separate the placenta from its attachments some time was lost, as there were firm adhesions. Kahn therefore pushed his hand through the middle of the placenta. A great quantity of liquor amnii escaped. A male fetus, seven inches long, was then extracted with ease, the head presented. Then the feet of a second fetus could be felt through a second bag of membranes. Hemorrhage ceased for awhile, and restoratives were given. A few hours later, as the patient looked very ill, delivery was hastened. The first placenta still adhered firmly, and had to be separated—a task which proved very difficult. Then a dead female fetus, smaller than the first twin, was extracted. Lastly, the second placenta, adherent to the posterior part of the uterine cavity, was detached with considerable trouble. The cavity was packed with iodoform gauze. The patient rallied, and was warned not to get up for three weeks. On the eleventh day she stepped out of bed and immediately fainted. On recovering, she noticed that her right arm and leg were weak and she could not speak easily. Next day coma set in and ended fatally.

THERAPEUTICS.

THE ELECTRIC TREATMENT OF FUNCTIONAL DISORDERS OF THE STOMACH.

In the treatment of functional disorders of the digestive apparatus, and especially of the stomach, electricity has definite but limited application. It may be used to stimulate the motility and the secretion of the stomach, or the motility of the intestines. The application may be made with both electrodes applied to the surface of the body, or with one electrode applied to the interior of the stomach. For the latter purpose the most suitable instrument is that devised by Doctor Max Einhorn, of New York. The metallic or carbon electrode is enclosed in a small perforated capsule of hard rubber, and the conducting wire is incased first in silk, and then in a soft rubber tube. The capsule is not as large as an ordinary grape, and can be swallowed without any inconvenience. Before its introduction the patient should drink a glass or two of water, and the connection is established by means of the water which enters the perforations of the capsule. The current is then diffused through the contained water, over the walls of the stomach. The application should be made either when the patient is fasting or at least three hours after a meal consisting of liquids, or semi-liquid diet. Some physicians prefer to wash the stomach immediately before applying electricity to the interior, and this is a very good plan. Galvanism or faradism may be employed. As in other applications of electricity to therapeutics, we prefer to regulate the strength of the current in accordance with the subjective and objective effects produced, rather than by the milliampéremeter. In cases of deficient muscular action the faradic current is preferable, one electrode being Einhorn's capsule, already described, the other moved from point to point over the epigastrium. In cases of deficient secretion we prefer galvanism, the gastric electrode being made the cathode. The external electrode, if applied over the abdomen, should be a large one. We generally use one of Morton's perforated-brass and spunk electrodes, 6x4 inches in size. Sometimes this is applied over the epigastrium, and sometimes over the umbilical region. Sometimes a small electrode is used in the back, over the vertebral column, at about the dorsal-lumbar junction. When it is desired to act upon the intestines, both electrodes may be applied over the abdomen, or one over the lumbar spine and one over the abdomen; or one in the rectum and one over the abdomen. A large electrode and a small electrode should usually be employed; the large one being always placed over the abdomen, the other as stated, either in the epigastrium, over the lumbar spine, or in the rectum. In the rectum, a cylindrical electrode, well wrapped with cotton, sponge, or spunk, should be used. When the abdominal application is labile, a small electrode should be employed and moved in the direction of the colon, from the right iliac fossa, up, across to the left and down. Faradism or galvanism may be employed according to the effect desired. When this is meant to be gently stimulating, galvanism is preferable; when the object is to excite strong muscular contractions, faradism is preferable. Gentle succussion of the abdominal contents may be effected by placing the anode upon the epigastrium, the cathode below the umbilicus, and using a rapidly interrupted, alternating galvanic current. This is often of considerable advantage in cases of costiveness, in which medication is not desirable or effective. Given from three to four hours after meals, it seems to promote absorption from the intestines, and thus to facilitate digestion and assimilation.

Electric applications to the stomach or intestine may be made daily at first, and, as improvement takes place, the intervals between the successive applications should be lengthened. The duration of a sitting should never exceed ten minutes, and from three to five minutes is usually sufficient. The power employed varies. When the gastric electrode is used, from three to seven cells, and when both electrodes are used externally, from three to ten cells of the ordinary bichromate battery usually answer the purpose. When faradism is employed, a current just sufficient to move the muscles of the patient's thumb is usually enough, but the judgment of the operator must be given scope. Employed with good judgment in suitable cases, these electrotherapeutic measures are among the most efficacious in the treatment of functional disorders of the digestive organs.—*The Philadelphia Polyclinic.*

NUCLEINS.

Ever since the application of bacteriology to scientific medicine, the biologists, the physiological chemists, and even the manufacturing chemists, have tried to produce something out of the animal kingdom by which disease can be prevented and cured. In the list of substances produced we find immunizing serums, animal extracts, toxins, antitoxins, nucleins, et cetera. The antitoxin, so-called, of diphtheria, and the nucleins, are among the later productions, and are now begging for a position among reliable therapeutic agents.

All of the host that have gone before are far from being established upon a satisfactory basis, either chemical, physiological, or clinical. The best that can be said of any of them is that, in experimental work, a few instances of more or less complete immunization in the lower animals have been noted. As yet, however, nothing definite has been accomplished in their application to man, and some, like tuberculin, have been complete and deadly failures.

Among the animal extracts an exception may be made in favor of the extract of the thyroid gland, which appears to have a decided influence in modifying the clinical symptoms of myxedema. But even here it is not curative; it simply stays the progress of the disease, and permits of a partial recovery. So long as the patient continues to take the extract the symptoms are held in abeyance; withhold the extract, and all the symptoms at once return. How long these favorable results can be maintained is still awaiting final settlement. It should be remembered, however, in connection with these favorable results, that the exhibition of the thyroid extract often produces grave constitutional disturbances, and cannot always be tolerated with safety.

Of the toxins and antitoxins none of them has yet reached an indisputable position among the list of therapeutic agents. For a time the brilliant results claimed for the so-called antitoxin of diphtheria—which, however, is an absolutely unknown quantity as yet—made it appear that a grand discovery had been made, and one which would fully demonstrate the power of serum therapy. But, as one closely scrutinizes both sides of this important question, and gets honestly at all the factors that enter into this involved problem, the evidence in favor of the value of antitoxin grows less and less certain, and one cannot but fear that it will ultimately prove a failure, as many of its predecessors have done. What, then, is the true position of the nucleins?

First of all, it may be well to try and ascertain what nuclein is, and from whence it comes. Most of the substances already mentioned have been absolutely unknown quantities. Nuclein, however, appears to be a little more tangible substance, and one which has in a measure been formulated. It is described as a tetra-basic acid, composed of carbon, hydrogen, nitrogen, phosphorus, and oxygen, with the formula $C_{29}H_{49}N_9P_3O_{22}$.

The antecedent chemical substance, from which nuclein seems to be derived, is a complex molecule, apparently the product of a synthetic process in plant life, by which a few atoms of phosphorus and iron are made to enter into combination with the proteid molecule. This more complex molecule has received the name nucleo-albumen. From this anabolic origin in the vegetable kingdom this compound gains access, as do the proteids, to the animal tissues, and here it appears to be deposited, by preference of nature, in the protoplasm or nuclei of the cells. It is also found in the secretions, and is then spoken of as destroyed or altered protoplasm. In some instances this may be true, but in other instances, as when it appears in milk and in the yolk of eggs, it can hardly be spoken of justly as destroyed protoplasm, for this is the only source of phosphorus and iron during the period of life when milk is the only form of food supplied to the animal economy. It may be altered, or it may exist in another isomeric form, but there is a wide difference between destroyed and isothermically altered protoplasm.

Nucleo-albumen, therefore, must be looked upon as a common constituent of all cell-elements. It is a substance which, when isolated, behaves like a strong acid; it is almost insoluble in water, but dissolves readily in the presence of a little alkali. This nucleo-albumen in many respects resembles the globulins, but differs from them in that it contains phosphorus. It is quite probable that the original nucleo-albumen is a vegetable globulin, to which phosphorus and iron atoms have been added, as a little iron is always found in this substance.

Viewed in this light, nucleo-albumen is a synthetic product of vegetable chemistry where anabolic construction is continually taking place. When this nucleo-albumen is oxidized, or split up, it yields as one of its katabolic oxidation products a substance which is far more simple in its atomic structure than the nucleo-albumen from which it came. To this more simple molecule, the name "nuclein" has been given.

Nuclein was first made from pus, then from spermatozoa, blood corpuscles, hens' eggs, the yeast plant, from liver cells, from cows' milk, et cetera. In fact, wherever nuclei are present a substance can be obtained from their contained nucleo-albumen which, in a measure, is rich in phosphorus, soluble in weak alkalies, insoluble in acids and in artificial gastric juice, and which has a sticky character somewhat like mucin, but differing from the latter in containing phosphorus.

From this method of development it appears quite clear that the opinion held by many observers that nuclein is not a normal constituent of the animal economy is the correct one. Nuclein, on the other hand, is a katabolic product obtained from the oxidation or splitting up of the complex molecule known as nucleo-albumen, in the same manner that urea and uric acid are katabolic products resulting from the oxidation or splitting up of the proteid molecule.

Nuclein has never been found in the excretions as one of the katabolic bodies of nitrogenous composition for the normal elimination of nitrogen and phosphorus from the body. In fact there is no evidence to show that such a compound is ever formed in the system, but simply that it can be made from the nucleo-albumen which is a common constituent of all cell protoplasm Nuclein, therefore, must be classed as a purely artificial product of the analytical chemist's laboratory.

As there is no tangible evidence at hand that animal life or animal chemistry can take simple molecules and build them up into more complex molecules, it cannot be argued logically that nuclein, if administered to the animal economy, can be converted into nucleo-albumen, thus enhancing the nutritive chemical activity and life of the protoplasmic elements.

We are left, then, for a solution of the therapeutic value of nuclein, if it has any, to one of two methods of explanation—methods by which all chemical compounds must be examined if they have not the common properties of the food-stuffs.

First, it may simply be a foreign body which acts by its irritating and poisonous properties, thus stimulating normal and inactive protoplasm to increased activity, without in itself undergoing any chemical change, as occurs with all the inorganic compounds. Or, second, it must be a substance which, from its organic nature, is capable of being rapidly oxidized, thus yielding heat and exciting active chemical mutations of a greater intensity and higher kinetic energy than occurs when the normal food-stuffs are introduced.

It matters not what the therapeutic agent is, in every instance it must be demonstrated conclusively when applied practically at the bedside:

First, that it enhances the power of the enfeebled system to utilize the normal food-stuffs to a greater advantage than otherwise would occur.

Second, that it increases the chemico-nutritive activity of the system, and thus increases the power of the animal economy to resist more effectually the intrusion of all abnormal conditions.

Third, there must be a marked change in the amount and number of the abnormal katabolic bodies eliminated in the excreta, and a marked tendency to change from the abnormal to the normal excretory products which indicate a normal state of the system.

Fourth, there must be an absolute decrease in mortality.

These are the conditions that must be met, wholly or in part, before any remedial agent can be considered as a thoroughly reliable therapeutic remedy. Working with this practical standard constantly before him, the clinician finds to his sorrow that many things which appear to work most satisfactorily in the experimental laboratory, are total failures when applied to sick and suffering humanity.

Thus far nuclein appears to be another compound to be added to the long list of total failures.—W. H. Porter, M. D., before Litchfield County (Connecticut) Medical Society.

SERUM THERAPY.

Schaefer (*Arch. gen. de Med.*, August, 1895) discusses the present position of the serum treatment, after referring to the researches upon which it has been built up:

(1) **Tuberculosis.**—Richet and Hericourt were the first to treat the disease with serum obtained from refractory animals, but up to the present moment no very good results have been obtained.

(2) **Rabies.**—Serum treatment does not appear to have a great future, as immunization by intensive vaccination gives greater success. (The latter is the Pasteur treatment.—Editor.)

(3) **Pneumonia.**—After referring to the investigation, the author observes that the serum treatment deserves to be considered. The reason that it has not been more generally adopted is probably on account of the difficulty of obtaining the serum from immunized rabbits.

(4) **Enteric Fever.**—Here the clinical application of laboratory facts has not given any very good results. This may be partly due to the length of time between the penetration of the poison and the treatment, and partly, possibly, owing to mixed infections.

(5) **Typhus.**—The injection of serum from patients who had suffered from this disease was adopted, with good results, by Legrain in an epidemic in Algeria.

(6) **Cholera.**—The cholera peritonitis of animals is very different from cholera in man. Behring recently announced that he had obtained a curative serum, but the results have not yet been published.

(7) **Syphilis.**—The serum from the dog and lamb have been employed, and sometimes with good results.

(8) **Streptococcus Infection.**—Animals have been vaccinated against this infection. The serum so obtained has been used in puerperal fever with good effect. It has also been employed in erysipelas and angina. (Marmorecks serum is an assured success.—Editor.)

(9) **Cancer.**—The results as yet obtained are insufficient to carry conviction. (Treatment with the toxine of erysipelas and b. prodigiosus promises earlier success.—Editor.)

(10) **Tetanus.**—Well-marked tetanus is very difficult to cure in animals, and thus it is not to be wondered at that the results obtained in man are not conclusive. The serum, however, provides a valuable prophylactic agent against tetanus.

(11) **Diphtheria.**—It is in this disease that the serum treatment has registered its greatest triumphs. Where mixed infections exist the results have naturally not been favorable.

The slight accidents caused by the treatment are to be disregarded, in view of its remarkable efficacy.

The author then refers to the successful application of the serum treatment to snake-bites. (Calmettes' serum is in use in India, and good reports have been published through the Pasteur institute.—Editor.)

The general results thus far obtained by the serum therapy promise a successful future for this new method of treatment.—*The British Medical Journal. The American Therapist.*

MEDICAL MELANGE.

NEW METHOD OF PRODUCING ANESTHESIA.

Rosenberg suggests the application of a ten-per-cent. solution of cocaine to the nasal mucous membrane a few minutes before the beginning of the administration of an anesthetic, as a means of diminishing the reflex due to irritation of the nasal mucous membrane, one of the greatest dangers from either chloroform or ether. Cocaine should be administered every thirty minutes, if the operation is prolonged.

THE NERVE THEORY OF MENSTRUATION.

Christopher Martin, in a well-studied paper, concludes as follows; (1) Menstruation is a process directly controlled by a special nerve-centre. (2) That this centre is situated in the lumbar part of the spinal cord. (3) That the changes in the uterine mucosa during the period are brought about by catabolic nerves, and during the interval by anabolic nerves. (4) That the menstrual impulses reach the uterus either through the pelvic splanchnics or the ovarian plexus—possibly both. (5) That removal of the uterine appendages arrests menstruation by severing the menstrual nerves.—*The Montreal Medical Journal.*

ABSORPTIVE POWER OF THE VAGINA.

Coen and Levi have recently made some observations on the absorptive power of the vagina under various conditions of health and disease. Iodide of potassium is easily absorbed. If a tampon soaked with a twenty-per-cent. solution be introduced into the vagina, iodine can be found in the urine in an hour. The excretion reaches its maximum in twenty hours. Fever and pregnancy increase the absorption. Hysterectomy makes no difference. Iodoform is absorbed slowly and in very small quantities, but more if fresh than if old. Salicylic acid is absorbed quickly, appearing in the urine in one hour and disappearing in twenty-four hours. Salol is very readily absorbed. Antipyrin is excreted in an hour and a half and is found for forty-eight hours, but its antipyretic action is feeble as compared with administration by the stomach. In brief, the vagina has undoubted absorptive power, and this is increased in pregnancy, in the puerperal state, and pyrexia.—*The Medical and Surgical Reporter.*

MELANCHOLIA CURED BY INTRANASAL OPERATION.

F. H. **Bosworth**, M. D., describes the case of a man, aged forty-two years, who suffered from depressed melancholia, at first periodical, but later constant, who became unfitted for business. He complained of the eyeballs feeling as if too large for the sockets and of a bursting pain between the eyes. He had at different times been operated on for varicocele, stricture, ligation of the pudic artery, removal of the testicles, and hemorrhoids. He had worn glasses, had his eye-muscles cut, and one eye enucleated. He had been circumcised, had his spine cauterized, and wore a seton in his neck. Examination of the nose showed the right nostril nearly occluded by a thickened bulging of the cartilaginous septum and the left middle turbinate thickened, with myxomatous degeneration, and evidences of ethmoid disease. The nostrils were freed with saw and snare, and all symptoms quickly disappeared. The man has since remained perfectly well.—*The International Medical Magazine.*

HONEY IN ERYSIPELAS.

DOCTOR C. E. HAYWARD, of Cropsey, Illinois, writes: "Several years ago, while treating some bad cases of erysipelas, a lady asked me why I did not use the remedy they used in Montana. I asked her what that was; she said honey. I did use it and found it very effective, and since then have used it in every case of erysipelas on any part of the body. My first treatment is the external application of honey. I shave the head and face if necessary, spread the honey thickly on cloth, cut holes for the eyes if the face is the part affected, and change the application every three or four hours. I have never had it fail to relieve the pain, heart swelling and nausea and to shorten very much the attack. I also give internally the usual remedies for reducing the fever and stimulating the emunctories. Three or four days usually suffice to bring about convalescence under this treatment. I could report numerous cases, but would rather every physician would give it a trial, and I am sure he would find a practical addition to his armamentarium.—*The New York Medical Record.*

LONGEVITY AND ACTIVITY.

AN item in an exchange reminds us that great men usually carry their full mental vigor and activity into their great old age—M. Chevreul, M. de Lesseps, Gladstone and Bismarck are evidences of this anthropological fact. Pius IX, although living in tempestuous times, reached a great age in full possession of all his faculties, and the dramatist Crebillon composed his last dramatic piece at ninety-four, whilst Michel Angelo was still composing his great canvasses at ninety-eight, and Titian at ninety still painted with all the vigor of his earlier years. The Austrian General Melas was still in the saddle and active at eighty, and would have probably won Marengo but for the inopportune arrival of Desaix. The Venetian Doge, Henry Dandolo, born in the beginning of the eleventh century, who lost his eyesight when a young man while on an embassay to Constantinople, through the treachery of the Greek Emperor Manuel, was nevertheless subsequently raised to the highest office in the republic, managed successfully to conduct various wars, and at the advanced age of eighty-three, in alliance with the French, beseiged and captured Constantinople. Fontenelle was as gay-spirited at ninety-eight as in his fortieth year, and the philosopher Newton worked away at his tasks at the age of eighty-three with the same ardor that animated his physical prime. Cornaro was as happy at ninety as at fifty, and in far better health at the age of ninety-five than he had enjoyed at thirty. The cases all tend to show the value and benefits to be derived from an actively cultivated brain in making a long life one of comfort and of usefulness to its owner. The brain and spirits need never grow old, even if our bodies will insist on getting rickety and in falling by the wayside, but an obstemious life will even drag that old body along to centenarian limits in a tolerable state of preservation and usefulness. This list can be lengthened with an indefinite number of names, but it is sufficiently long to show what good spirits and an active brain will do to lighten up the weight of old age. When we contemplate the Doge Dandolo at eighty-three animating his troops from the deck of his galley, and the brave old blind king of Bohemia falling in the thickest of the fray at Crecy, it would seem as if there was no excuse for either physical, mental or moral decrepitude short of the age of four-score and ten.—*The National Popular Review.*

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ORIGINAL CONTRIBUTIONS.

MEMOIRS.

THE TREATMENT OF HABITUAL CONSTIPATION.*

By W. F. METCALF, M. D., Detroit, Michigan.

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No sharp line can be drawn between constipation and health. Periods of time between stools vary with different individuals. Irregularities, however, indicate an unhealthy condition.

An action of the mind, a movement of an arm, produces waste. That waste becomes poisonous if not removed from the system in due time, and there results a sallow, nervous individual, with dark circles around the eyes, with cold extremities, and irregular heart, drowsy during the day, and wakeful at night. Regularity of the bowels is as essential to the health of the cells of the physical economy, as is the sewerage system to the inhabitants of a city, and the subject of its treatment is so extensive that I shall not endeavor to do more than to refer to a few points of interest, and trust that the discussion will bring to our attention many more. We cannot think of the treatment of this condition without considering its causes.

I shall say nothing of constipation due to organic changes in the brain, spinal cord, heart, lungs, or liver, other than to refer to the fact that I believe in many cases these organic changes are due to long continued functional disturbances of these organs caused by irritation somewhere on the nervous system of nutrition, distant from the affected organ, and of the presence of which the sufferer may have no intimation.

The most marked pathology in the lining of any viscus or tube of the body, is found in the place of exit of its contents. Thus the pathologic change of the mucous membrane of the stomach is greatest at the pylorus; of the small intestine near the ileo-cecal valve; and the most marked pathology of the digestive tract will be found in the rectum. The same observation may be made of the genital tract, and of the urinary tract. In these lower openings of the body then, guarded as they are by sphincter muscles, which close them tighter and tighter as the local irritability increases, we frequently find changes which disturb, through the agency of the solar plexus, the secretions or peristalsis of the intestinal tract; or they may tire or paralyze the centers in the cord by which voluntary control is had of defecation, and the resulting retention of feces in the rectum causes its dilatation and the consequent atrophy of its muscle. Where the muscles of the intestinal walls are atrophied or the muscles of the abdominal walls weakened, especially found in obese persons, the use of the faradic current, the negative pole in the rectum and the positive over the cecum, is beneficial; also the use of cold bathing and exercise.

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*Read before the Detroit Medical and Library Association.

Hypochondriasis, melancholia, anemia, and neurasthenia, are quoted by writers upon this subject as causes. To successfully treat such cases of constipation the causes of these conditions must be removed. Irritations of environment, as smothered ambitions, unsatisfied desires, unrealized hopes, disturbing the function of organs through the mind, produce in time congestions which result in, first, hypertrophy, then atrophy of various membranes. Changes thus produced may probably be first observed in those organs whose functions are largely controlled by the mind, particularly the genital and urinary, and in the rectum, since that, as well as the tongue and mouth at the other end of the tube, is an indication of the condition of the digestive tract. To remove these abnormal conditions, that the solar plexus may discharge properly the duties of the high office which it holds by divine right, is the obvious duty of the physician. These conditions cause constipation and constipation exaggerates these conditions until we find cervical endometritis, ovarian degeneration, bladder and urethral irritation, irritable rectal papillæ, hemorrhoids, ulcerations, fissures, fistulæ, and various other conditions with which you are all more or less familiar; also atrophy of the various mucous membranes, a condition following neglected hypertrophy.

The ordinary methods employed in rectal surgery are so painful that in advocating the removal of hemorrhoids for constipation, I think it necessary to give in detail a method which is well nigh painless and in every way satisfactory in dealing with these tumors of all shapes and sizes and in all locations. Cauteries and clamps are *never* needed. Ligatures are *seldom* required. Those external should be clipped off with the scissors. In cases of those situated above the external sphincter a strip of mucous membrane should be removed from the margin of the skin to the upper limit of the tumor over its surface, the fibrous tissue broken up with the point of the scissors to free the dilated vein-extremities, which are then clipped out. This done, you will find that the tumor has disappeared. In the procedure there is no necessity of wounding the arterial twig accompanying the vein. If the hemorrhoid be large, containing much fibrous tissue, it may be clipped off smoothly or split open and emptied of clots and then the redundant tissue trimmed away. If larger arterioles spirt than can be controlled by torsion, a ligature may be applied to the artery only, as in other surgical procedures, but to ligate the whole hemorrhoidal mass is unsurgical. If the hemorrhoidal condition extends above the internal sphincter there is usually much redundant membrane which should be removed from the whole circumference, the healthy membrane being pulled down from above and stitched to the skin. In doing this care must be taken to free the membrane from the internal sphincter that the latter may not be pulled down; also that the incision at the skin margin be made in the right place; that too much mucous membrane be not exposed and, on the other hand, that the skin margin be not drawn within the grasp of the external sphincter. This procedure is necessitated only by the worst type of cases. I think I have not used more than a half dozen ligatures in the last fifty operations for hemorrhoids. To lessen the capillary bleeding a tampon of wool covered with silk may be inserted after thoroughly stretching the sphincters. In some of these cases it is also necessary to stretch and thoroughly wash the sigmoid, since much mucus and other debris often accumulates there. The plug should be removed just before the patient regains consciousness, otherwise it produces pain. If pain is complained of, gauze wrung out of hot water should be held firmly against the anus for a few minutes, after which there is no pain ordinarily. Occasionally there is some colic but this may be relieved by passing a rectal tube.

In case of intestinal catarrh, where the irritability of the membrane is reduced by its coating of mucus, the use of large alkaline enemata will prove beneficial, yet their long continuance may tend to produce torpor and will remove also the mucus which forms the natural lubricant. Where the intestinal secretion is deficient, while we are seeking the cause, we may get benefit from the administration of pancreobilin and small doses of podophyllin. Where the peristalsis is defective, temporary benefit is derived from nux vomica, aloin and belladonna.

In the eating of coarse foods and fruits there is much waste which excites the intestines to action; moreover, the grape-sugar containing the same proportions of carbon, hydrogen, and oxygen as does milk-sugar, is ready for absorption, and therefore does not tax the digestive secretion. In nervous women, however, the irritation produced by coarse foods may be so great as to reflexly cause constipation.

All passive congestions of the portal system must be relieved. Bile, normal in qnantity and quality, excites peristalsis. Its quality may be impaired by too frequent excitation of the liver-rhythm by food or alcoholics. As a rule, the latter when indicated should be taken only with meals.

I have made note of fifty cases of habitual constipation treated surgically. I do not wish you to infer that these operative procedures were had for constipation alone, yet these reports are made for the observed effect upon that habit of the body. Of the twenty-five cases in which I removed pathologic conditions of the rectum and of the uterus and its appendages twenty were cured, three benefited, and two not benefited. Of the two not benefited one still carries ovaries undergoing fibroid enlargement, and the other presents symptoms of a severe spinal irritation, although every observable cause is removed. Of four cases in which I removed the uterus and adnexa, not touching the rectum, two were cured and the other two not benefited but they are both suffering from hemorrhoids. Of the eight cases in which there was pathologic condition in the rectum alone all are cured. Four cases of obstinate constipation in boys are all cured by circumcision. Of the seven cases in which I operated upon the rectum, and for phimosis, all are cured. The two cases in which urethral and rectal pathology were corrected are cured. Thus in fifty cases of habitual constipation forty-one were cured and the failure in three of the other nine is apparent.

I shall report briefly five typical cases.

CASE I.—R. P., aged six years. Has always been constipated; was very thin and dyspeptic. On February 18, 1894, I performed circumcision, removing much smegma from behind the glans penis. He began to improve in general health at once. His bowels have since been regular.

CASE II.—The father of this boy, aged thirty-four years. Had always suffered from constipation and dyspepsia. Was emaciated and was tired all the time. Had been treated by different physicians without permanent relief, and had decided to have nothing further to do with medical men. Encouraged by the rapid improvement in his son he requested an examination. I found the rectum filled with internal hemorrhoids, which I removed March 26, 1894. He said he never knew that he had rectal trouble. He has not been constipated since.

CASE III.—M. W., aged six months. Had been constipated since birth. I advised the passing of a small rectal dilator every second day. This was done four times only. The child was not troubled further with constipation.

CASE IV.—A. K., aged nineteen years. Had always been troubled with incontinence of feces, passages being irregular. He had been subjected to electrical and other methods of treatment without benefit. It was to him a most distressing condition of affairs. On December 29, 1894, chloroform was given and a rectum enormously dilated and containing, I think I may say without exaggeration, more than a quart of fecal matter, was found. I could find no trace of an internal sphincter. The external was normal in size but did not close completely. I amputated about two inches of the mucous membrane, bringing the healthier down from above and stitching it to the skin, first tightening the sphincter by taking a small tuck in each side. The result was all that could be desired.

CASE V.—Miss D., aged forty-five years. Had passed the menopause at thirty-eight. She had been constipated more than twenty-five years. She was dyspeptic, irritable and cross, always had cold hands and feet, and was troubled with insomnia. On February 7, 1894, I dilated the vagina and cervix, washed, curetted and packed the uterus, performed circumcision, and removed some internal hemorrhoids and papillæ from the rectum. I took the following report from her three months later: Circulation in extremities, good; digestion, good; bowels, regular; has gained much in flesh; and is more cheerful, energetic, and happy. She called upon me a month ago to tell me how well she had been since operation.

I am not oblivious of the danger, gentlemen, to which one who makes deductions from less than several thousand cases, subjects himself, of being appellated "crank," but if I succeed in eliciting an increased interest in the subject of constipation my sacrifice will not be in vain.

THYROIDAL DISEASES.*

BY FREDERICK W. ROBBINS, M. D., DETROIT, MICHIGAN.

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WHEN, two weeks ago, your secretary notified me of my election into this body of friendly medical spirits, and asked for a paper to be presented at this time, the desire not to seem to shirk duty overcame my sense of prudence, and although oppressed with much unusual work I consented to write something for this meeting, and also decided to depart from my usual topic of genito-urinary disease in some of its phases and open a discussion on the thyroid gland.

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* Read before the DETROIT ACADEMY OF MEDICINE.

It has seemed to me (perhaps I am mistaken) that the general practitioner, and surgeon as well, are often, when confronted with disease of this organ, particularly the simpler varieties, too apt to settle the diagnosis with the word goitre, and the treatment with the medication potassium iodide. This was the idea gained during my earlier days of medical education and with some marked examples to the contrary the same idea has been thrust upon my attention often since. Has this been the experience of other gentlemen here to-night? Often in this city we have had reports of certain surgical aspects of thyroid disease presented before medical bodies, and of late much has been written on the subject, until it is hardly known where we stand. This much is certain: some diseases of the thyroid are amenable to treatment by the surgeon only; other cases should be treated medically only; and still other cases may be treated by the surgeon or physician; and it will be questioned which method will be followed by the best results. In a body like this, then, it may not be amiss to consider some of the problems as they present themselves before us to-day, and as the result of discussions on the part of the neurologist, general practitioner, and surgeon we may be a little helped in the treatment of diseases of the thyroid.

In order to appreciate the pathology, and treatment of pathological conditions of this organ we must keep in mind its anatomy, and in a word let me recall to your minds the double gland lying on both sides of the neck connected by an isthmus. This gland has a membranous covering but no ducts. It is composed of numberless small cavities or acini lined with cuboidal epithelium and these acini are filled with colloid material. The acini are surrounded by small blood-vessels and lymphatics in close connection with the basement membrane, and holding these portions together is fibrous connective tissue.

As to the physiology of the gland it would be presumptuous in me to state any simple and concise use which it has and has only. Reasoning from the great circulatory disturbance which arises in that form of goitre which we term exophthalmic, where, according to some, there is great cell proliferation and decrease of colloid material, the deduction that the thyroid has some regulating action over the circulation is overthrown by the experiments of GODERT, who completely removed one thyroid and gradually transplanted the other in front of the anterior aponeurosis of the superficial muscle of the neck in two operations, thus completely destroying the normal relation between the gland and vessels and nerves. The animal thrived, but died when later the transplanted portion was removed. So it would seem that the cellular function of the gland is the important thing, and not any regulating action over the circulation. ZIELINSKI finds colloid material in the lymph spaces as well as the acini. BENISSOWITSCH finds that thyroidectomized dogs will live on a milk diet but die on a meat diet, and thinks that one of its functions is the transformation of carbonic gas into urea. Whatever is not known, being not discussed, we do nevertheless know something of the results of the absence of this gland as seen in those cases of strumipriva, and judging from the marked results of the administration of thyroid extract in these cases we must believe that in some manner the colloid material secreted by the cuboidal cells within the acini is essential to the welfare of the individual.

In exophthalmic goitre it has been demonstrated that there is cell proliferation and diminution of colloid material. This observation will be hard to reconcile with the ideas of **Wette**, **Moebius** and others who think that increased or perverted thyroid secretion, acting as a poison, produces the nervous symptoms of **Graves'** disease. P. **Marie Gaillard** would place the nervous disturbances first, and the exaggerated action of the thyroid or hyperthyroidation as secondary, and this latter view would appeal to my mind as the more rational sequence when I see young girls at the period of puberty, highly excitable, developing an enlarged thyroid, rapid pulse, et cetera. One such case comes prominently to my mind where the child developed all the symptoms of **Graves'** disease and finally entirely recovered after a period of treatment where arsenic, strychnine and ergot were the principal drugs used. Another case would go to prove the same sequence, that of a woman under forty with exophthalmic tachycardia, and but slight enlargement of the thyroid and extremely nervous, who had a miscarriage followed by enlargement about the size of a large hen's egg, diagnosed to be a pus tube, who recovered entirely from the exophthalmus and the nervous symptoms when the cause of her nervousness was removed. Coincident with the gradual diminution of the pelvic tumor the intense nervous excitement grew decidedly less, the protrusion of the eyes disappeared, and the heart's action became normal. To my mind, then, it appears that the thyroidal enlargement is secondary to other conditions.

Not to delay too long we will consider at once some of the conditions that actually exist under the general term goitre and note the very different treatment called for. We will only mention sarcoma and carcinoma. They are rare but terrible diseases and for their cure there is only one hope, that of complete removal with the knife. There is no other way. Of the other varieties of the disease, there is first hypertrophy of the thyroid gland or parenchymatous goitre. This condition comes on most frequently at puberty or during pregnancy. Here there is a uniform increase in the glandular structures, an increase of colloid material, and sometimes the growth may be quite vascular. There is general enlargement of the entire gland. Patients are usually anemic and generally neurotic, at least this was the case in the eight or ten cases that I noted during the first half of last year. Some New York authors go so far as to claim that the syrup of hydriodic acid is a specific in these cases. I have given it in from one-half drachm to one drachm three times a day with no effect. Possibly others can tell us how to get better results from this drug. I have experimented with hypodermic injections into the substance of the gland, and in some cases have, by the tapeline, found a gradual improvement. One little fellow was perfectly well after six injections of from five per cent. to ten per cent. carbolic acid given once a week with absolutely no other treatment. Some advise the internal use of potassium iodide and the unguentum potassium iodide externally. The first I consider poor treatment and think much better results will be found from the internal use of arsenic and strychnine. Over and over again, in years gone by, I wasted my patient's money in making them buy the iodide of potash. If we desire to have any results from the absorption of the iodide of potash the drug must be incorporated with lanolin and not lard.

When these growths are vascular the best results will be obtained from electricity, and very possibly in the more ordinary enlargements spoken of. I have not personally had much experience with this method of treatment, however, in these cases, and probably others can give us more light on the method and how it can be applied to the best advantage. Thyroid extract I have given to a number of patients in five grain doses with no effect.

Then, in parenchymatous goitre, we have a variety which properly belongs to the physician.

The next class, however, adenomata, cystic goitre or bronchocle, whichever you choose, are distinctly surgical diseases. An adenoma is an encapsulated tumor containing vesicles of the same character as the gland itself, formed, according to WARREN, from remains of fetal structures, and may be of any size from that of a cherry to that of an apple or larger. The vesicles may coalesce until a large uni- or multilocular cyst may exist, causing atrophy of the normal glandular structures. I had one case, that of a woman about thirty, in which such a tumor was intensely distressing during pregnancy, wherein the symptoms were much like those of exophthalmic goitre, and I was inclined to question whether the symptoms were not produced by the atrophy of the glandular structures as well as pressure of the tumor. Cases of this variety are known from their nodular form, there being frequently several in the gland, sometimes on both sides. A number of times I have been exasperated by the knowledge that such patients were treated in a manner otherwise than surgical and of course without effect. When small, these tumors may be removed by cutting through the gland structures directly upon the membranous sac. As a rule they will come out much like a wen and with equal ease, but sometimes they are in closer connection with the blood-vessels and come out with difficulty. F. J. SHEPHERD, of Montreal, reports sixteen cases removed in this way, all successfully, by enucleation, although the internal jugular was severed in one case and one of the thyroid arteries in another. Other surgeons treat successfully such cases by thyroidectomy. It was only a few years ago that men devised such an operation and there was a mortality of over forty per cent. Now, including all cases, the mortality has fallen to about five per cent.

I have had the pleasure of assisting DOCTOR MCGRAW in the partial removal of quite a number of thyroids on account of their very large growth and pressure symptoms and all with perfect recovery, although in one case the patient, came near dying just as she began to take the anesthetic. Two cases of cystic adenoma I have succeeded with ease in curing in the following manner: In the first a trochar was passed into the cavity of the cyst, which was as large as an orange, causing difficulty of breathing from pressure, a purulent fluid was withdrawn and about two drachms of a twenty per cent. solution of carbolic acid thrown into the cavity, and after massage allowed to flow out. This treatment was followed by a rise of temperature lasting for a few hours only. A second injection was made a week later and the large cyst cured. The other case was that of a young lady about eighteen years of age, with the cyst about as large as an egg. She was treated in the same way with equally good results. The injection of tincture of iodine in alcohol, 1–12, one-half drachm once or twice a week is recommended by some. MORELL MACKENZIE advises a two per cent. solution of perchloride of iron hypodermically. GRAVES reports one hundred and forty cases in London treated by injections of iodoform. In those epidemics of goitre reported in the French army it may be that injections are especially valuable from their germicidal action. Often the cystic goitre contains a black fluid from the rupture of blood-vessels into the sac. Such a condition will not affect the method of treatment adopted.

The treatment of adenomata can be summed up as strictly surgical, consisting in enucleation, aspiration, drainage, and injection.

Not to further review the symptoms of exophthalmic goitre or GRAVES' disease, I desire to say a word or two concerning treatment. First, it is important to remove, as far as possible, any influences internal or external tending to excite the nervous symptoms. Digitalis, strychnine and ergot have seemed to me to have some good effect. Thyroidal extract I have tried in one case with no appreciable result and this case finally drifted out of my hands and is now under the care of DOCTOR FLINTERMANN who has been treating her with electricity. I saw the patient recently and was glad to find her very much improved, and since looking up the subject with more care I find that the general opinion of writers on this disease is that in all cases in which there is an angiomatous condition of the gland, or in GRAVES' disease, we must look for the best results from the use of electricity, either galvanic or faradic. Removal of the thyroid in GRAVES' disease is fraught with great danger and is not to be advised.

One word as to myxedema and I am done. This condition occurs most frequently in middle life, and more frequently in the female. There is often much mucin found beneath the skin. The thyroid is absent or very markedly atrophied. In these cases there is only one treatment and that the use of thyroidal extract. The reports are all very favorable and some of us will remember the case presented awhile ago at the Detroit Medical and Library Association, in which, after fifteen years of practical imbecility, the most wonderful results were noticed from a few weeks treatment of three grains of Armour's extract several times a day.

RECTAL ULCERATION.*

BY SAMUEL E. CAMPBELL, M. D., SAGINAW, MICHIGAN.

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ULCERATION of the rectum in the past has received comparatively little attention if we are to judge by the consideration accorded it in the journals and even in the text-books. I venture to say that in any of the prominent journals of general medicine and surgery, it will be found that there is far more attention given to the removal of the kidney than to all varieties of ulceration of the rectum, and yet there are probably ten cases of ulceration of the rectum to one requiring nephrectomy. From investigation of the subject I am led to believe that ulceration of the rectum is much more frequent than is generally supposed, and owing to the great distress which is often experienced from it, it merits greater consideration than is usually bestowed upon it.

I do not expect to present at this time an exhaustive study of rectal ulceration, but hope to direct your attention thereto, so that in this city at least, the ovaries may not be removed in order to relieve pain or other disturbance caused by ulcers in the rectum.

The etiology of rectal ulceration is varied. Dysentery has been reckoned as an exciting cause, and yet it must be rather rare, for I understand that no case of ulceration due to dysentery has been reported as a cause for pension to the Pension Department at Washington. Constipation may sometimes cause an ulcer, the hardened feces acting like any foreign body swallowed and passed per anum. Many ulcers are found in tuberculous patients, and perhaps in some cases the local lesion is the only point where tubercle exists, but it is usual to find well defined tubercular processes in other regions. Possibly there are cases in which a varicose condition of the veins exists similar to that in the legs, where a slight injury may lead to quite extensive ulceration. Syphilis is the probable cause in at least half the cases. We may say, then, that simple ulceration from trauma, as from a foreign body, hardened feces, or pregnancy may exist; tubercular ulceration—including the condition scrofula; syphilis—secondary and tertiary; chancroidal ulceration and malignant disease.

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* Read before the SAGINAW COUNTY MEDICAL SOCIETY.

The subjective symptoms may not be very characteristic, and owing to the proximity of the urinary and genital organs the symptoms are not infrequently referred to them, especially if some lesion is found in these parts. And this will apply to all kinds of ulceration of the rectum, except when it is very low, lying upon the external sphincter, and when the ulcer is confined to this location, it were better to speak of it as "fissure of the anus," for it can hardly be designated a rectal disease unless the rectum is also involved. In fact there may be comparatively little trouble directly pointing to the rectum. It may be a little diarrhea in the morning is complained of, but constipation may exist, or there may be a single stool in the morning or at least once a day, and unless it is in the case of an observing person, the fact that the feces are covered with slime may not be noticed. In a recent case, a history of constipation a year or more previous, followed by a slight attack of diarrhea, was all that pointed to the rectum. For a considerable period there had been about one action of the bowels a day, and that painless for the most part. Pain across the hips and lower part of the back, and inability to do the usual work without being exhausted were the symptoms noted by the patient. Digital examination revealed considerable ulceration posteriorly and extending around to the sides of the rectum.

In specific ulceration there may be a history of more and more progressive constipation for which the patient seeks relief without any pain or other inconvenience. Even in malignant disease constipation may be the cause for which the patient seeks relief, when it will sometimes be found that extensive ulceration exists without sufficient pain to attract attention.

Given, then, a case indicating from the subjective symptoms a rectal disease, or a case in which the condition of the patient cannot be accounted for by any other complaint, a digital examination is necessary and a speculum may be required. By digital examination we learn whether the sphincters are irritable, and the condition of the mucous membrane; and whether stricture, tumors, or ulceration exist, we shall have to discriminate between the different kinds of ulceration and stricture, and find out if there be any hemorrhoids, polypi tumors, or fistulæ.

In simple ulceration and tubercular ulceration, a difference will be felt between the normal mucous membrane and the ulcerated portion. In the ulcerated spot a certain roughness will be observed and often the border of the ulcer can be felt as a more or less well defined ridge. Usually there should be no difficulty in discriminating ulceration from piles, for in ulceration there is a destruction of tissue and in piles there is a new formation, and generally simple ulceration will be found higher than the usual seat of piles.

Polypi are higher, but it would seem that no one could make a mistake in confounding any kind of ulceration with a polypus. When fistulæ exist there is usually present a more or less well marked ridge. Between the different varieties of ulceration it is more likely that difficulty may be experienced; but, even here, there are some cardinal principles that should nearly always lead us to the right conclusion.

Tuberculous ulceration will rarely be found in a vigorous individual, but in a person whose appearance should lead to a correct diagnosis. It is possible, however, to find a simple ulceration occasionally in persons suffering from phthisis. The ulcer due to syphilis, except the mucous patch which is a very superficial ulcer, will be accompanied by more or less stricture, for this variety of ulcer is simply the breaking down of a gummatous tumor, and with the ulcer there will be felt a deposit underneath the mucous membrane and very frequently annular. In malignant disease there is likewise a new growth and often the sensation imparted to the examining finger will suggest the nature of the disease as being different from hemorrhoids and it should be borne in mind that cancer occurs lower down than simple ulcer ordinarily, except the so-called irritable ulcer and anal fissure, and when high up is more likely to be near the sigmoid flexure.

Age should also be considered in arriving at a decision. Cancer rarely occurs before forty and simple and tuberculous ulcers will most frequently be found before forty-five and generally before thirty years of age, though cancer may be found at an earlier age (especially the soft variety) and simple ulceration at a later age. As syphilis, that is, acquired syphilis, is a disease of early adult life as a rule, we will likely find that syphilitic ulceration and syphilitic stricture occurs before forty or forty-five.

Taking, now, the other instrument of diagnosis, the speculum, if necessary—and in the majority of cases so far as diagnosis is considered it should not be necessary—a SIMS' or PRATT'S will generally be found the best, occasionally a larger, or a tubular will be required. On introducing the speculum and opening the valves, if it be a bi- or trivalve, piles will be found to drop in between the blades, while in ulceration, the plane of surface will be, unless the rectal walls be greatly relaxed, quite close to the lower border of the edge of the valves. The piles, too, as before stated, are usually within one and one-half inches or less of the border of the external sphincter, while simple ulcer is from one and one-half to four inches above.

In simple ulcer the surface is velvety on inspection and there should be no occasion for mistaking an ulcer for healthy mucous membrane. The irritable ulcer will lie over the sphincters and usually posteriorly. Anal fissure is likewise more frequently posterior, although it may occupy any part of the circumference and there may be more than one. As before stated, ulcer due to cancer will be ordinarily found lower than simple ulcer, and also lower than that due to syphilis, which will most frequently be found at two to five inches from the anus.

The ulcer in cancer will very likely have ragged edges, the simple ulcer has smooth, and the syphilitic will be circular with raised edge, although sometimes in annular stricture it may extend as an ulcerated band nearly or quite around the bowel.

A mucous patch will be characterized by a whitish or pearly appearance like that seen in the throat. Chancroidal ulcer is said to be very common in France, but it is certainly not often seen in this country and probably will not be until we have an influx of OSCAR WILDE's disciples.

Inasmuch as anal fissure is so closely related to rectal ulcer it may not be out of place to refer briefly to that. In most cases a very moderate stretching of the sphincters and touching the ulcer proper with carbolic acid or silver nitrate solution, followed in four to six days by a repetition of the divulsion if it is not healed, and the application of iodoform, will usually bring about a cure of the fissure in a short time. It is true that more severe treatment has been advocated and practiced, but in my opinion as a rule it is unnecessary. Incision completely through the sphincter has been practiced, and scarification alone and in connection with dilatation has been resorted to.

In simple and irritable ulcer the treatment should be much the same. Divulsion, either with the fingers or speculum, together with more or less scraping and trimming of the edges if they be ragged so that the surface will be smooth and healthy, and the application of a solution of nitrate of silver—thirty or forty grains to the ounce—mopped on freely, followed after twenty-four hours by injections of iodoform in sweet oil—ten to twenty grains to the ounce. After a week or ten days it may, in some cases, be desirable to mop the ulcerated surface again with the nitrate of silver solution.

Such internal medication as each case requires will be indicated. Easy action of the bowels should in all cases be insured. In tuberculous ulcers the same treatment is indicated but a longer time will elapse before the ulcer heals and the patient will require the most nutritious food and general restoratives.

In cases complicated by hemorrhoids, the latter should be removed, in most cases, by the ligature. Mucous patches are usually amenable to iodide of potash alone or with some local application as compound tincture benzoin. Iodoform in oil or mild solutions of nitrate of silver.

By far the most intractable ulcers to treat will be those due to the later stages of syphilis. They will require our greatest vigilance and then we shall often fail; in fact some go so far as to say that they are not amenable to any treatment as the stricture on which their cause depends is said to be of a fibrous nature and not absorbable. I imagine, however, that in some cases at least a forcible divulsion of the stricture, together with full doses of iodide of potash and suitable local applications, will result in some amelioration of the symptoms. In cases of failure, and if the stricture become impervious, then resort will have to be made to colotomy.

Ulceration from malignant disease is one of the most formidable diseases we shall have occasion to deal with. When discovered early, and located within the first two or three inches from the anus, extirpation of the cancerous mass will undoubtedly be the most satisfactory way of dealing with the ulcer, but if not discovered until late, or if the seat of the malady is high in the rectum, the patient is certainly entitled to our deepest sympathy, for so far as treatment is concerned it will not be very satisfactory, and if in spite of the ulceration the lumen of the bowel becomes too much contracted for the passage of feces, colotomy will be found the only means of prolonging life and that for but a brief and miserable period.

MODIFIED MILK IN INFANT FEEDING.*

BY LUTHER S. HARVEY, M. D., DETROIT, MICHIGAN.

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WHEN, for any reason, it becomes impossible to procure for the infant a proper supply of normal breast milk, the question arises as to what will best supply its demands for nutrition. Many clinical experiments have been made in attempts to solve this difficult problem. The market is flooded with a multitude of preparations bearing testimonials of varying value as to their clinical success in infant-feeding. The vast number of these so-called foods but proves their inefficiency in meeting the requirements of the case. We have, for a long time, been feeling in the dark, and it was not until DOCTOR MEIGS made chemical analyses of his mixture, that any attempt was made to solve the question on a logical basis. DOCTOR MEIGS, having found that certain proportions of cow's milk, cream, sugar of milk and limewater gave the most satisfactory results in his practice, determined to find out how near his mixture agreed chemically with human milk. He found that the analysis of his mixture agreed almost exactly with that of the average breast milk. This, then, proved that the clinical success of the mixture was due to its similarity to mother's milk, and established a logical basis on which to work out the problem.

The average of a large number of analyses of breast milk show it to contain:

Fat, ...	3–4 per cent.
Milk sugar, ...	7 per cent.
Albuminoids, ...	1–2 per cent.
Ash, ...	1–02 per cent.
Total solids, ...	12–13 per cent.
Water, ...	87–88 per cent.

It is of slightly alkaline reaction and sterile. It has a temperature of 98° to 100° Fahrenheit, and is drawn slowly and without difficulty from an apparatus which collapses as it is emptied, so that there is no tendency to the formation of a vacuum.

Now, if it is possible to imitate nature, and produce a mixture artificially which shall agree in chemical composition with the analysis given, we have certainly the very best chances of success. Breast milk is an animal food and we must, therefore, look to animal substances to furnish materials for imitation. Cow's milk is the only available animal substance which bears resemblance, in chemical composition to human milk. The average cow's milk is found on analysis to contain:

Fat, ...	4 per cent.
Milk sugar, ...	4.5 per cent.
Albuminoids, ...	4 per cent.
Ash, ...	0.7 per cent.
Total solids, ...	13.2 per cent.
Water, ...	86.8 per cent.

We see, by a comparison of the above tables, that while the amount of fat in the two is the same, the amount of sugar in cow's milk is much lower while the percentage of albuminoids is twice that of human milk. It has been found, by experiment, that it is the high percentage of albuminoids in cow's milk that makes it unfit for infant feeding. In order to overcome this objection, we must modify the milk by diluting it from one-half to three-fourths. But in doing this, we also lower the percentages of fat and sugar which must be brought up to the proper standard by the addition of cream and milk sugar. By using cream containing a known standard per cent. of butter-fat, it is possible, by simple calculation, to prepare a mixture containing any desired percentage of fat.

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* Read before the DETROIT MEDICAL AND LIBRARY ASSOCIATION.

While the percentage of fat and albuminoids in human milk are subject to considerable variation, it has been found by repeated analyses that the percentage of sugar does not vary materially from seven. We can, then, make a sugar solution of standard strength and raise the amount of sugar up to the desired standard.

It will also be observed that in diluting the milk to obtain the proper percentage of albuminoids, we also lower the percentage of mineral matter, making it agree practically with the amount in human milk. Alkalinity is obtained by the addition of limewater in sufficient amount to make the reaction agree with that of breast milk.

Breast milk is sterile, while cow's milk, as ordinarily obtained, is contaminated with bacteria in vast numbers. The question of how to overcome this contamination is one that has received a great deal of merited attention. The first method of overcoming this difficulty was boiling. This has the disadvantage of coagulating the albuminoids, breaking up the milk solids generally, giving the milk a disagreeable flavor and rendering it very difficult of digestion. Preferably to this is the sterilization by steam which alters the constituents of the milk to a less degree and gives a taste somewhat more agreeable than that of boiled milk. The discovery of Pasteur, however, seems, to be the most rational and satisfactory method of accomplishing the desired results. Pasteur discovered that by heating milk to a temperature of 155° to 170° Fahrenheit, for different periods of time according to the temperature employed, it was possible to destroy all developed bacteria without in any way altering the constituents of the milk. Spore-bearing bacteria are capable of subsequent development at a favorable temperature, which fact renders it necessary to keep Pasteurized milk at a low temperature in order to preserve its sterility. In a recent experiment the writer was able to keep Pasteurized milk entirely unchanged for a period of fifteen days by preserving a constant low temperature. Success in Pasteurization is dependent on several important points. Means must be at hand to heat the milk uniformly to a given temperature which must be under perfect control. The length of time that each portion of the milk is exposed to the given temperature must also be exactly determinable and capable of perfect regulation. It is also necessary that the process be carried on in closed vessels so that there will be no exposure to air. The milk must be immediately cooled to a temperature below 50° Fahrenheit, also without exposure, and transferred into sterilized receivers in such a way as to avoid subsequent infection.

The question of the nutritive value of boiled and sterilized milk as compared with Pasteurized and raw milk is one that has excited much discussion. Many hold that the sterilization of milk does not injure its nutritive qualities. Koplik's recent experiments in this direction seem to show that the estimation f the total nitrogen excreted is of little value in determining the question. It seems to me, however, that nature should be our guide in this matter as in other questions of infant feeding. If we are able to render milk sterile without subjecting it to a temperature high enough to alter its constituent elements, it is by far the method to be preferred.

In order that the milk and cream used in our attempt to imitate nature shall be of the best quality, it is necessary to know its source. We should begin with healthy cows of proper breed and character, and have them fed and cared for in such a manner as to insure the most perfect condition of health. The tuberculin test should be employed to make sure that none of the animals are affected with tuberculosis. In order that the amount of dirt and bacteria introduced in the stable shall be as small as possible, it is essential that the utmost cleanliness should be observed. The cows' udders and the hands of the milkers should be carefully washed before each milking, or, what is more preferable, is the use of a patent pail by means of which the milk does not come in contact with the air of the stable but passes directly through sterilized tubes into a sterilized receiver. By this means all bacterial infection is overcome except that which occurs in the milk ducts themselves. This latter may be partially overcome by the rejection of the fore milk. In order that the best results may be obtained, it is essential that the milk be Pasteurized as soon after milking as possible. This arrests the development of bacteria that it has been impossible to exclude, and assures a milk of the highest possible nutritive value.

The development of bacteria in such enormous numbers as takes place under ordinary circumstances must of necessity occur at the expense of the nutritive elements of the milk. Milk that has been acted upon by countless numbers of bacteria for a period of twenty-four hours, must show a very different organic chemical composition from that which is freshly drawn from the udder or been preserved by Pasteurization. This is, I think, a matter too little taken into account in infant feeding. The proteids of cow's milk do not at best exactly correspond in organic composition with those of breast milk, and we should for this reason be all the more careful to procure milk that is not further changed by the depletion consequent upon bacterial growth.

The cream used in bringing the percentage of butter-fat in the diluted milk up to the normal standard is, unless procured from a proper source, another means of introducing bacterial infection. Ordinary cream, raised in shallow pans, exposed to the air for a period of twelve to twenty-four hours is, of course, rich in bacteria. Cream, separated from fresh milk by a centrifugal machine, has been recommended by ROTCH on account of its constant percentage of butter-fat. The temperature to which the milk must be raised, in order to pass through the separator properly is very favorable to the rapid development of any bacteria that may be present. It is a well-known fact that separator cream does not keep as long as that raised by the ordinary gravity method. It is essential, then, if separator cream is used, that it should be Pasteurized immediately after being separated. A very satisfactory method of producing sterile cream is to raise it on Pasteurized milk in cans so constructed that there is no exposure to the air. The milk is drawn off from under the cream by means of a faucet placed at the bottom of the can. As soon as the cream begins to flow, it is received into sterilized jars and sealed. A few experiments with this apparatus make it possible to procure a sterile cream of a standard per cent. of butter-fat without the expense of a separator.

The milk-sugar used should be of the best quality and should make a clear, colorless solution. Boiled water, or water filtered through a PASTEUR filter, should be used. Limewater should be used to overcome the acidity of the milk and cream, only in sufficient amount to render the mixture slightly alkaline. It will be found that in using milk that is Pasteurized very soon after milking, less of the limewater is required on account of the less degree of acidity of the milk.

It will be readily understood that these intricate details can only be properly carried out in a laboratory fitted for the purpose. In the attempt to modify the milk in the home, the first obstacle to be overcome is the difficulty in obtaining sterile milk and cream of proper quality and of a constant known percentage of butter-fat and other milk solids. Next we are confronted with the difficulty of instructing parents and nurses how to modify the milk in order to obtain the percentages desired. This consumes much of the physician's time. The difficulty in getting patients to properly carry out the instructions given and the consequent unsatisfactory results has led many a physician to resort to the prescribing of patent foods. This he has not done from choice, perhaps, but has been driven to it as a last resort to rid himself from endless worry and annoyance in the pursuance of a method the results of which have been far from satisfactory.

The establishment of milk laboratories such as have been in successful operation for the last few years in Boston and New York and the one recently established in this city, make it possible for the physician to prescribe a proper food and have it prepared with the same care that would be given to a prescription for drugs at the pharmacist's.

All children do not thrive on the same food. There is no set combination of percentages that will suit all cases. It has, however, been found by experience that the percentages agreeing with the average breast milk give satisfactory results in the majority of cases. It is advisable to have analyses of the breast milk made from time to time and the analyses recorded so that, if at any time the breast milk should fail, or become unfit for the proper nutrition of the infant, the same percentages could be supplied on which the infant formerly thrived. When no analyses have been made, it is best to recommend the normal percentages and determine clinically whether that particular mixture suits the case. If it is found that the food is difficult of digestion, the percentage of albuminoids is probably too high, and by a careful reduction we may overcome the difficulty. If, on the other hand, the food seems to agree well while the child does not appear to thrive, the percentage of proteids or fat is probably too low and must be raised to supply the infant's demands for nutrition.

Another advantage in having the food prepared in a laboratory is the increased facility in regulating the time and amount of feeding. Only the number and amount of feedings prescribed by the physician are at hand, and the mother or nurse knows that if the amount prescribed by the physician be exceeded, the supply will be exhausted before the next daily ration arrives. This exercises a very satisfactory control over the temptation to overfeed.

With the means at hand of procuring sterile ingredients, and by mixing only in sterilized jars containing sterilized air, and by keeping the mixture cold after it is prepared, it is possible to produce a modified milk that will be safe during the hottest weather. If the methods above set forth are properly carried out, the prevailing temperature makes no difference in the keeping qualities of the food.

The advantages I claim for this method are that the constituents more nearly approach those of human milk in that they have neither been changed by the presence of bacteria nor by being subjected to a high temperature.

The question of the proper feeding of infants still leaves many problems to be solved. The mineral constituents of breast milk and the part they play in infant feeding are practically unknown. Certain other constituents hinted at under the name of volatile principles or the "antiscorbutic element" may prove to be something of value. Though much still remains to be learned, it is our duty to act upon all the knowledge we possess. When by any chance the infant is deprived of its proper food, we should spare no pains to imitate as closely as possible what nature has done so well.

ALOPECIA AREATA.*

By SIDNEY I. SMALL, M. D., Saginaw, Michigan.

[PUBLISHED IN The Physician and Surgeon EXCLUSIVELY]

One day in April, 1891, there appeared upon the left occiput of a friend of mine, a spot nearly the size of a silver quarter, from which the hair had suddenly disappeared. It was not a mere thinning, but an entire absence of hair, leaving the scalp as bare as a piece of ivory. Around it the hair was loose, and came out with slight traction, and even the use of the brush. At the margin of the spot, while in its progressive stage, appeared numerous short, stubby hairs which came out readily, and showed, under the microscope, atrophied roots. The only sign of irritation was a slight itching a day or two previous to the discovery of the spot. The area increased a little in size, then remained apparently stationary, after about four months a growth of fine lanugo-like hair appeared, and within about six months from the first appearance of the trouble the spot was entirely covered, though for some time remained noticeable for its difference in color, being much lighter than the original. This, however, gradually changed with the growth and finally became as dark as ever.

In October, a spot appeared upon the other side in nearly the same latitude, and in December, one a little above this, which was followed rapidly by many others; indeed there was a general thinning of the hair over the entire scalp, so that in view of the possible result my friend suggested negotiating for a couple of scriptural bears to offset the jeers of the small boys.

The trouble was much worse during and immediately after a mild, but somewhat prolonged attack of the grippe which was accompanied by severe headache and loss of flesh. At times the condition would seem to improve, as shown by less tendency of the hair to fall, then there would be periods—a day, or several days—when it would appear as bad as ever. In April, with an improvement in the general health, the hair ceased to fall, and the new growth appeared. This new growth was white and remained so for some months but gradually returned to its original color, and in about eighteen months from the time of the appearance of the first symptoms little difference was noticeable, either in the color or growth. The tinge of gray which had appeared earlier in life remained the same. The face was not at all affected except in one particular. During the course of the second attack the beard changed rapidly in color until it was white as the hair, and never recovered its original shade.

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*Read before the Saginaw County Medical Society.

In the treatment various remedies were used, and how much credit is due to any one it is impossible to estimate. The first spot ceased to grow under the use of corrosive sublimate in oil of turpentine, and the hair appeared after blistering the entire area with carbolic acid. In the second and more general manifestation, besides these remedies there were used cantharides, capsicum, jaborandi, oil of cade, galvanism and even crude petroleum. I believe that considerable benefit was derived from tonics especially cod-liver oil.

With my present knowledge, if I were called upon to select from the large list of remedies given, I would use corrosive sublimate in some stimulant, probably oil of turpentine, with or without the addition of tincture of capsicum; and when the progress of the disease was checked or had ceased, I would blister with carbolic acid, and follow in due time with a mildly stimulating lotion containing a small amount of oil, to be used occasionally, even after recovery had taken place. In chronic cases and those in which the areas were very large and numerous, I would try chrysarobin instead of the carbolic acid. Unless contraindicated I would give tonics, and in every case adopt such measures, medical and hygienic, as would tend to bring the general system into its normal physiological condition.

Regarding the etiology of alopecia areata, authorities differ, some believing it to be the result of a trophoneurosis, others that it is parasitic; while a third class believe that some cases are trophoneurotic and others parasitic. **Buckley**, after thorough and repeated search for the parasite, says: "The cause of the falling of the hair must be looked upon as neurotic, although opinion is still divided as to its true nature." **Robinson**, in his work published in 1885, says: "We are forced, then, to refer alopecia areata to nervous influence." Later, however, this opinion seems to have been modified, and he is more inclined to the parasitic theory. **Crocker**, 1888: "Until, therefore, an organism of uniform characters can be demonstrated in all recent cases in the same way that the fungus of tinea tonsurans can be, the parasitic origin of alopecia areata will, to say the least, remain unproven." **Elliott**, **Fox**, **Duhring**, **Jamieson**, and **Jackson** consider it to be of nervous origin.

In the case recited the fact that the first appearance was at the point of encounter of the head with the barber's chair would suggest a parasitic origin; so would the progress by peripheral extension, and the apparent benefit from the use of local applications of an antiseptic nature; but how about the beard, which grew white during the progress of the disease, yet no falling of the hair occurred? There was no evidence of contagion, nor has there been in any one of the limited number of cases which I have seen. In several the first symptoms appeared just after an attack of the grippe. A business man, aged sixty-two years, of this city, noticed the first symptoms just after recovering from an attack in 1891. Progress was rapid and the spots, though small, were numerous, appearing upon the face as well as the scalp. Recovery, too, was rapid and complete, excepting that the new growth remains white. The only application was an ointment containing oil of cade and zinc.

The tendency of the disease is toward recovery, although there is great variety in its behavior. In some cases, after the appearance of one small spot, progress ceases, and repair begins and goes on to perfect recovery; in others it is only after many months or even years; and in still others the disfigurement goes on in spite of care and treatment, until the hair disappears from scalp, face, and every part of the body, though fortunately these cases of alopecia areata maligna are rare. Recurrences are not uncommon. The younger the patient, the smaller the areas; and the slower the progress, the more favorable the prognosis. In the varying behavior under local treatment I think we have one of the strongest arguments in favor of the neurotic origin. An agent which would destroy the parasite in one case should do it in another.

In regard to treatment I have nothing to add, unless to emphasize my preference for stimulants externally and tonics internally. In his choice of these the physician will be governed by the conditions apparent in each case.

TRANSACTIONS.

DETROIT MEDICAL AND LIBRARY ASSOCIATION.

STATED MEETING, NOVEMBER 1, 1895.

THE PRESIDENT, ERNEST T. TAPPEY, M. D., IN THE CHAIR.
REPORTED BY WILLIS S. ANDERSON, M. D., SECRETARY.

EXHIBITION OF SPECIMENS.

DOCTOR TAPPEY exhibited a specimen of carcinoma of the right kidney removed postmortem from a man aged seventy-seven years. This patient had been under observation for about a year. When first seen a tumor of considerable size could be felt and a diagnosis of probably sarcoma of the kidney was made. Toward the last there was pain in the kidney, leg and loin, and later pain occurred in the chest. For three days prior to death the right leg was paralyzed. The autopsy revealed a large growth involving the right kidney, and a portion of the intestine, peritoneum, and lymphatic glands of the abdomen and groin. The gross appearance was that of carcinoma.

DOCTOR STEINBRECHER presented a specimen, passed from the bowels, that looked like a bug. The patient had abdominal symptoms, pain, griping, et cetera. The doctor presented a specimen showing gummatous infiltration in the brain, with symptoms of epilepsy.

DOCTOR TIBBALS exhibited a specimen of ovary and tube removed from a young girl. The patient gave a history of a cold coming on during menstruation, accompanied by uterine and ovarian pain. Vaginal examination negative. Later, when seen by DOCTOR TIBBALS, she had temperature of 102.5° with soreness and pain on the right side, corresponding to MCBURNEY'S point. Later the patient was seen by DOCTOR DONALD MACLEAN in consultation. She then had a temperature of 104° with symptoms pointing to an appendicitis. Operation was performed and revealed an abscess of right ovary, which had ruptured into the peritoneal cavity causing acute peritonitis. The tube contained no pus. The temperature dropped soon after the operation, but quickly rose again. The patient died from acute peritonitis. In discussing the case DOCTOR SPRAGUE related a similar one in a virgin. He does not believe that pus in the ovary necessarily means gonorrheal infection. The same view was held by DOCTOR INGLIS.

REPORTS OF CASES.

DOCTOR INGLIS reported the following case of acute ascending spinal paralysis:

By the courtesy of my friend, DOCTOR O'BRIEN, I am enabled to present the following history. DOCTOR O'BRIEN early recognized the condition and gave me an opportunity to follow the progress of the case:

Ellen McL., aged twenty-seven years. A fleshy girl who comes of a sickly family. One sister died of some cardiac affection. While she has always been fat she has practically never been a well girl since childhood. There is no history of any special severe disease but a history of long invalidism. DOCTOR O'BRIEN has known her personally for very many years and is certain that for fourteen years she has had a habitually rapid pulse. For the past five years she has been a pretty complete invalid, and three years ago her left foot was clumsy for a time. This, however, passed off and in the spring of this year (1893) she was much better in all respects than she had been for five years past. Four weeks ago a barn in the rear of the house caught fire and the danger of the house catching fire frightened her exceedingly. A week after this fright (which at first had caused only general nervousness) she began to notice a weakness in both feet. This rapidly increased involving the legs higher and higher up and developing in the parts first affected into a complete paralysis of motion. She became first unable to stand and at the present time cannot move any part below the knees in the slightest degree. She can still draw up the knees a little but slowly and with great effort. About two weeks after the disease appeared in the feet, and after it had progressed upward so that the lower extremities were wholly involved, the same conditions appeared in her hands; here the mode of progress has been the same, traveling from the fingers upward. The symptoms, throughout, have been equal on both sides of the body. At my first examination, on October 5, beside the motor symptoms above noted, I found total absence of the knee reflex. The sphincters were not yet involved.

Sensation in both legs was to a considerable extent impaired, although not at all so completely as motion. The most marked change in sensation was a long retardation. When she finally perceived the impressions she could still distinguish fairly well, although there were areas, especially on the soles and about the heels, which were wholly devoid of sensation.

Her mental condition was clear and fairly calm, her breathing rapid, pulse 136, heart sounds normal, no thyroid enlargement and no exophthalmos.

The history of long rapid heart was strongly suggestive of GRAVES' disease but DOCTOR O'BRIEN, as well as the patient herself and her friends, were quite certain that she had never had either enlarged thyroid or protruding eyeballs. Urinalysis gave entirely negative results. She has always menstruated normally, the last time two weeks ago. It should be stated that, throughout her last illness, she had no rise of temperature.

A grave prognosis was given and the further progress of the case justified this.

The day after I saw her both sphincters became paralyzed, the paralysis of the lower extremities became complete, and that of the upper extremities nearly so, respiration became extremely rapid and the sense of dyspnea extreme, pulse-rate steadily increased, delirium of a low type and finally death.

The case is a typical one of acute ascending spinal paralysis. Such cases are fortunately not common, yet of sufficient frequency to make us careful to render an early diagnosis.

I well remember a similar case occurring at the outset of my own professional career. The girl was a remarkably fine, healthy, well developed young woman. The symptoms of paralysis, from beginning to end, corresponded with those which have just been detailed. At that time the apparent rigor of my patient, the absence of pain, fever or any constitutional disturbance led me to take a hopeful view of the case for some days. The steady progress of the paralysis to a fatal termination showed the fallacy of my prognosis—not a light matter to a young practitioner.

In the present case it would be much more natural to give a grave prognosis, for the history of long invalidism and rapid heart would lead one to expect an easy breaking down of the circulation. It is, therefore, the more instructive to note that, in the former case, the progress of the affection was just as rapid and uncontrollable as in this, notwithstanding that in that case the circulatory apparatus was entirely normal. It is evident that the role of the circulation of the blood in these cases is of little or no importance. Beside the value of recording the case my principal object in reporting this case is to bring out this fact. We have, for a long time, laid emphasis upon conditions of hyperemia or anemia of certain areas or organs as being causes of disease processes. While I do not intend to deny that such changes in the local circulation exist, or that they do in some instances cause other changes, I believe that far too much importance is often given to this class of phenomena.

In the present case the first thought is to try to trace the connection between the long continued rapid pulse and the subsequent acute ascending paralysis. One is tempted to believe that the long invalidism and year-long rapid heart resulted in a defective blood supply to the entire spinal cord and that the final outbreak was the result of this. In the same way conditions of hyperemia or anemia of the brain are invoked to explain the occurrence of epilepsy.

That an *acute* anemia or hyperemia can cause a convulsion I fully believe, but that a long-continued alteration in the blood supply can act as an acute change does I very much doubt. In the present case I cannot believe that the rapid heart action can fairly be looked upon as having caused the ascending paralysis.

The pathology of ascending paralysis is obscure. That the gray matter of the cord is the seat of some serious and progressive alteration of nutrition the symptoms themselves demonstrate, but the affection leaves no changes visible under the microscope. This simply corroborates the fact which the study of many forms of nervous disease shows, that the dynamic processes occurring within the ganglionic cells are the essential elements in all nervous processes. It is not the gross changes in the blood-vessels, the hyperemia, or the anemia, which it is our task to change by our therapeusis, but the invisible processes of cellular metabolism. The cerebral protoplasm in a case of advanced phthisis is the subject of an extreme anemia, but the clear, bright, keen intellect shows that the dynamic processes of the cerebral cells go on. beautifully in spite of the anemia.

There is a wide field for the therapeutist in regions which the pathologist must leave as beyond his reach. The pathologist's work has tended strongly of late years to foster skepticism in therapeutics, but a consideration of the limitations of pathology ought to give therapeutists encouragement. Our therapy of ascending spinal paralysis is indeed ineffective now, but it may well be that we shall ultimately learn how to combat the obscure processes which cause the symptoms. The successes which have been achieved in the past three or four years in the treatment of myxedema by the use of thyroid glands demonstrates that even in conditions accompanied by marked organic changes a remarkable restoration of nutrition of the nervous centers can be brought about. The gross changes demonstrated postmortem by the pathologist in many instances do not explain the real cause of disease; they do not explain many of the symptoms, and we can, by treatment, affect the function of organs in spite of gross changes.

The cases here reported suggest another line of discussion also. The steady involvement of the gray matter of the cord from its lower to its upper end is strikingly suggestive of the progress of some infectious process. It travels much as an erysipelas travels. It is rapid in its progress. It involves the entire gray substance without regard to function but simply by contiguity. Other spinal affections select certain strands or tracts, leaving adjacent ones untouched. And just as an erysipelas shows little or no postmortem change, so in this case. The conclusion is easily reached that we are dealing with an acute infectious disease.

Here, again, however, I would like to ask the question: If the disease is an infection, what relation was there in our patient between the fright and the spinal trouble? The same question comes up in the explanation of chorea: Is chorea an infectious disease? if so, How does fright so frequently cause it? I offer these thoughts in the hope of stimulating discussion.

Doctor Hitchcock: I do not think that it was necessary to establish any relation between the cardiac trouble and the nervous disease as there was a history of cardiac disease in a sister. Involvement of the sphincters is unusual, although it does occasionally occur. Gray gives a number of lesions as postmortem findings. Treatment is usually hopeless, although some temporarily improve, and a few recover. There is a question as to the accuracy of the diagnosis in those cases that recover. I question whether fright ever really caused this disease or chorea. I recall the case of an Englishman, broken down in health and neurotic, who had marked convulsive seizures. A postmortem failed to reveal any lesion in the cerebro-spinal axis. This case illustrates the lack of pathology of some marked nervous troubles.

Doctor Flintermann: I think that there is often difficulty in differentiating this disease from acute myelitis and poliomyelitis. Landry's paralysis differs from myelitis in that there is usually no increase of temperature, et cetera, or trophic change, or sensory or sphincter involvement. In regard to the influence of fright in the causation of certain nervous disorders, I think that psychical impressions might change the blood and destroy some nutritive agent necessary to nutrition of the ganglia. In the treatment of this disease diet, rest, electricity and massage have been of benefit. These agents are of more value than medicine. Under this treatment some cases entirely recover.

DOCTOR J. P. NEWMAN: I attribute the cause of this disease to infection when no lesion is demonstrable.

DOCTOR INGLIS: There ought not to be but little trouble in diagnosing this affection. The progressive ascending character of the paralysis differentiates it from other cord lesions. Gross pathological lesions do not necessarily explain the symptoms in such diseases as chorea, hysteria, epilepsy and tetanus. I believe that fright causes profound disturbances of nutrition, and in this way may cause chorea.

STATED MEETING, NOVEMBER 8, 1895.

THE PRESIDENT, ERNEST T. TAPPEY, M. D., IN THE CHAIR.
REPORTED BY WILLIS S. ANDERSON, M. D., SECRETARY.

DISCUSSION OF PAPERS.

DOCTOR W. F. METCALF read a paper on "The Treatment of Habitual Constipation." (See page 529.)

DOCTOR DOUGLAS: The essayist of the evening has, upon me certainly, sprung a bit of surprise by the free-lance manner in which he has attacked pretty nearly everything below the diaphragm to relieve a little sluggishness in the main sewer. I presume that it is possible to have more gates than one obstructing the free exit of waste matter. I never was aware that the gates in the genito-urinary system had any apparent visible or tangible connection with the exit opposite them, which the essayist apparently convinces all is the case. I have operated on some cases similarly as the doctor but not for the same object. I may have obtained cures in that direction but I am not aware of it. The paper will certainly have the effect of turning the thoughts of some in a new direction, and I, among others, will perhaps see some prospect of curing constipation by circumcision or other operations equally suggestive or equally striking if not equally successful. Certainly the points which DOCTOR METCALF has brought forward in connection with hemorrhoids and their effects on constipation are very applicable indeed. I have no doubt that a great portion of humanity are suffering in the way he has indicated. The pain and irritation following the congestion and edema of the cellular tissue about the rectum are always aggravated and increased by defecation. We are well aware of the fact that the lessening of the irritation at that point renders the act easier, and this makes the involuntary control less marked, and thus somewhat relieves constipation. The habit in this case, perhaps, is father to the trouble, and still the curing of the trouble removes the habit. I have no doubt but that many of these cases are first produced by the habit of resistance to the desire for stool at a fixed time. Many people are foolish enough to resist the desire on account of the calls of business. I have in mind the case of a merchant who was in the habit of restraining his desire to go to stool on account of pressure of business, and a condition of constipation has thereby been induced for which he would give a good deal of his time now if he could obtain relief. In all cases requiring operations for the relief of constipation it is well to ascertain the original cause; whether the soreness and irritation would not have been the result of the obstinate habit above referred to. It is a well-known fact that a great many people have the power of resisting the calls of nature at the proper time. I recall the case of a woman who was able to retain her urine for forty-eight hours. As the doctor remarked in the first part of his paper, there is no doubt that the retention of the waste material in many instances produces an alteration of function which causes the patient to suffer from poor health. Again, the condition of constipation produces a train of symptoms which, in many instances, no doubt, are not amenable to medical treatment exclusive of surgical procedure. We often prescribe for these cases and endeavor to relieve them, but it is a notorious fact that the treatment of constipation medicinally is not followed by good results. I think that the main trouble in overcoming constipation medicinally is due to lack of industry on the part of the patient as well as to the proper application of remedies. There are very few patients who will pursue medicinal treatment unless in danger of their lives. As a rule they will, carry on this form of treatment for a certain length of time, and if not cured will become careless or allow the thoughts of business to interfere, so that we are compelled to accept very poor results. I believe the best results are obtained from diet, in conjunction with such remedies as seem applicable to the case, designating food for the morning meal in sufficient amount to produce one copious stool each day. I have tried to impress patients with the importance of following directions. The feature that crops up generally is loss of power in the repeated use of any remedy. Perhaps there is no one remedy to-day that retains its power as well as the aloetic preparations. They are the most retentive in giving satisfactory results; but lack of application on the part of patients seems to be a great stumbling block to the successful medicinal treatment of constipation.

Doctor Robbins: I am always interested in anything that Doctor Metcalf presents, either to myself personally, or before the society, because I feel that he is an earnest worker and careful thinker, although many of the cases in which he would advise operations are those which, it seems to me, are oftentimes undertaken without any great assurance that they will produce the results desired. Sometimes finding a case in which circumcision is required for instance, from the condition of the prepuce, other symptoms being present which we may think are not due to the condition of the parts, we proceed with the operation. As far as we are aware the results to be expected are left in great doubt. The conditions of the rectum producing reflex disturbances are such that we are very often inclined to overlook the real cause of the trouble. That lesson was impressed very thoroughly on my mind two years ago by a case in which I did not convince myself positively as to the conditions present. It was a case in a family in which I was the attending physician for a long time. The man was occasionally stricken with attacks which seemed to be epileptic in character. He never complained of any pain or suffered in any way, yet his heart was a little rapid at times. These attacks came on once every two or three months, and his wife often found him in this condition on the floor of the bathroom. Not suspecting any disease of the rectum the attention of the family had not been called to that region, but he drifted into the hands of an orificial surgeon, not a regular, was operated on, and he has never had an attack since. Just one other point, in relation to those cases in which there has been an extraordinary dilatation of the rectum due to the vast amount of fecal matter present. As I understand the doctor, he simply drew the rectum down and removed the extra tissue. I cannot understand why such an operation would be necessary in such a condition if there is a normal contraction of the sphincters. It may be improved by dilatation, and it seems to me that would produce all the good results we could obtain by the method described by DOCTOR METCALF. If the doctor has any well considered explanation for the rationale of that operation I would like to hear it.

DOCTOR METCALF: In answer to DOCTOR ROBBINS' request for an explanation as to why I amputated the rectum in that case, I would say that the dilatation was so great the redundant mucous membrane would not have the power to contract to the normal size. I may say that I could put my two fists into the pouch and yet there would be space left around. The object was to get rid of that redundancy, and the result by this method justified the procedure. I thank DOCTOR ROBBINS for the encouragement given, and for citing the case which he did. I wish to take exception to the statement of DOCTOR DOUGLAS in saying "wholesale method" of dealing with these cases. I believe in doing neither more nor less than is necessary. The majority of the operations were not done for constipation alone. Many of the patients were chronic invalids, but these cases were reported for the observed effect of the operation upon the constipation. Many of them were done for local conditions. As DOCTOR DOUGLAS suggests, it is well to look beyond and endeavor to ascertain what was the original cause of the constipation. I recognize as a fact that irritations of the rectum, of the urethra, of the testicle, or of a varicocele may, through the agency of the solar plexus, cause constipation, and there is no reason why these effects should not be removed. DOCTOR ROBBINS brings up the point that we cannot foresee the results of these operations, but I have always found the chronic invalids glad to accept any means of relief offered.

DOCTOR DOUGLAS: I would not desire by any remark of mine to reflect on anything DOCTOR METCALF may have brought forward, or that the word "wholesale" may have produced a wrong impression. My reference to that was that where constipation existed, from the tenor of the paper we could take almost any form of irritation or deformity of the rectum and by performing an operation for their relief would probably effect a cure of the constipation. I do not doubt that a great many of the cases cited by the doctor as suffering from constipation have been cured by the operation, but the question in my mind is whether the operation was the direct or the indirect cure of the constipation.

REPORTS OF CASES.

DOCTOR SPRAGUE reported the following case:

MRS. T. J. N. came to me on the 15th day of last June to engage my services for a coming confinement. She was nearly forty years old, married about one year, saw her last menses about the 10th of December, and had suffered from nausea during the first few months. For three months before coming to me she had suffered from varicose veins of the legs and labia. She complained of pain in the legs and in the region of the heart, and shortness of breath. She was a little jaundiced and had a coated tongue. The pulse was not strong but there was no heart lesion apparent. There was also a slight edema of the legs and labia.

I asked for a sample of urine, which she sent two days later, and which contained an abundance of oxalates and urates and a suspicion of albumen. The specific gravity was 1032. I prescribed the free use of water and milk as beverages, with calomel followed by compound ox-gall tablets.

She did not report again for a month. She had been a little relieved but was suffering again from all the above symptoms together with tinnitus aurium. Says she takes cold very easily and always feels it in her ears.

The urine was now free from suspicion of albumin, the specific gravity being 1024, but there were oxalates still. I now gave nitro-muriatic acid.

She now reported frequently and improved but slowly, the tinnitus aurium and dyspnea being the most troublesome symptoms. On the 25th of August I found the oxalates gone but urates still present in excess, the specific gravity 1020, and a heavy deposit of albumin by heat and nitric acid. Also one or two hyaline casts. On the 27th and 28th the albumin increased until the deposit formed by standing twenty-four hours after the test was more than one-fourth of the whole volume. The feet and legs were now very edematous and I began to consider the propriety of inducing labor, which we did not expect until the middle of September, but nature came to our relief and she was delivered on the morning of the 29th of August.

After delivery, which was not very difficult, she was much prostrated and developed some fever. In fact, the temperature was 103° on the day before delivery, the first symptom of fever that she had manifested. The temperature remained constantly from two to four degrees above normal and she perspired often and freely, so that I began to fear sepsis, particularly as the lochia were offensive. Accordingly I curetted and gave an intrauterine antiseptic douche on the 4th of September, which was followed by a lower but not normal temperature, therefore I repeated it on the 7th, three days later. The temperature gradually subsided and the perspirations diminished until the temperature became normal about the 18th of September. Meanwhile the dropsy had disappeared but the albumin and urates had persisted, so that I advised principally milk for diet, but allowed some meat and eggs and bread because of her debilitated condition. She gradually gained strength and began to get up on the 19th at which time the womb was firmly contracted. She had a little cough and some dyspnea during all her confinement in bed, but both seemed to be due to nasopharyngeal catarrh from which she suffered considerably.

She took a severe cold on the night of September 22, and began to suffer pain in the left side. The house was cold, and as she was very susceptible to change of temperature I did not use a stethoscope, but finding intercostal neuralgia and slight evidences of pleurisy I blistered and gave such relief that she was around the house again in two or three days. The temperature was not taken again, as she did not seem to have fever when I saw her, until on the 9th of October, when she expectorated an ounce or two of prune-juice sputum in the course of a few hours, describing a sensation as of an abscess bursting before the expectoration began. The temperature was now 101.5° Fahrenheit. Physical examination revealed dullness or flatness over the lower left chest, with exaggerated resonance on the right side, while a cavernous resonance was found over a small area of the left lower lobe, on percussion. Auscultation revealed an amphoric respiration and voice over the spot above mentioned with subcrepital and mucous rales and diminished respiratory murmur over the whole left lung, while over the right the respiratory murmur was exaggerated and of a harsh sibilant character. The apex of the heart was in nearly the normal position, a little to the right and the heart sounds were normal.

I began to fear that I had a fibroid phthisis to deal with, and asked for a consultation which was granted. On the evening of the 10th instant DOCTORS JAMIESON and ROBBINS saw her with me. On the morning of the 12th she died. DOCTOR ROBBINS will give you the further details and show the pathological specimens.

DOCTOR ROBBINS then presented the specimens. There was an abscess in the lower lobe of the left lung surrounded by consolidated tissue, believed to be tubercular. The upper portion of both lungs were normal. Sputum examined before death showed tubercle bacilli. The kidneys were congested, with pyelitis in one. The heart was normal except, possibly, a slight thickening of the aortic valve.

DOCTOR FLINTERMANN asked if an endocarditis with embolism could not account for the patient's death.

DOCTOR RORBINS thought that the appearance of the heart was opposed to that theory.

DETROIT ACADEMY OF MEDICINE.

STATED MEETING, OCTOBER 22, 1895.

THE PRESIDENT, W. R. CHITTICK, M. D., IN THE CHAIR.
REPORTED BY C. W. HITCHCOCK, M. D., SECRETARY.

DISCUSSION OF PAPERS.

DOCTOR F. W. ROBBINS read a paper entitled "Thyroidal Diseases." (See page 532.)

DOCTOR INGLIS: I wish to give as I can some results of practical experience; and this has led me to lay most stress on electricity, particularly galvanism I am almost hopeless as to the efficacy of digitalis in these cases. Strophanthus has served me better than digitalis in exophthalmic goitre, a disease, by the way, by no means easy of management and of very grave doubt as to ultimate results. If I ever use the thyroid extract again, I shall watch the patient most carefully and drop its use promptly on the first symptoms of cardiac depression, and shall keep the patient in bed during its use. In cases of thyroid enlargement, other than those of exophthalmic goitre, I have found that applications of an ointment of the red iodide of mercury does have a marked effect.

DOCTOR EMERSON: Like DOCTOR INGLIS, I distrust digitalis in these troubles, and have had far better results from the fluid extract of cactus grandiflora, in lessening the tachycardia. In some cases, but one prescription has given the patient such comfort that I have not seen her again for weeks or months. Some have claimed no results, but in these cases I have thought this rather due to too timid use of the drug. The dose is often quoted at *two minims* and is far too small. I have given as high as twenty minims with excellent results and no untoward effect. As to external applications, I have used with best effects the compound iodine ointment. In young girls at or about the age of puberty, I have repeatedly met these goitrous enlargements, and I regard them as really secondary and due to a constitutional condition. While exophthalmic goitre is a grave (GRAVES') disease, I think we must modify our former gloomy prognosis, as better results are now obtained. The rationale of thyroid extract I have never been able to see and have never used it. I should like to ask DOCTOR INGLIS what he considers a proper galvanic current.

DOCTOR INGLIS: From one to three milliamperes, usually about three. After I get a patient well started in the use of electricity, I join together in a small box a suitable number of cells to give just about the desired current and trust somewhat of the treatment to the patient.

DOCTOR MANTON: My experience is limited. I have, however, encountered a number of cases in neurotic young girls at about puberty. A constitutional tonic treatment has availed most in my hands in getting menstruation well established and in bringing these troubles to an end. Cases in pregnant women, I have found due, likewise, to constitutional causes and best handled by like treatment. I recall seeing DOCTOR CREDE, of Dresden, remove successfully several thyroids, although the operations were very bloody ones.

DOCTOR SPRAGUE: Only one case of exophthalmic goitre has come into my hands and I instituted a galvanic treatment which, however, was irregularly kept up and the patient finally passed out of my hands. I generally combine, in cases of simple goitre, applications of iodine, introducing it by the cataphoretic action of the galvanic current.

DOCTOR BIGG: I am willing to accept, without question, what DOCTOR ROBBINS has written of those diseases of the thyroid which call for surgical treatment. As to the use of the syrup of hydriodic acid, I am of the opinion that potassium iodide is a more effective drug in these cases. The one per cent. syrup may be safely given, however, in much larger doses than the doctor mentions, where the salt is not well borne. I do not hesitate to prescribe it in from one to three and even four drachm doses in urgent cases. The parenchymatous form of thyroid disease is the one with the treatment of which I am most familiar, and the drug which has given me the most satisfactory results is the biniodide of mercury, although I avoid the greasy preparation of the drug in these cases. I use, preferably, an aqueous solution, which can be applied with a camel's-hair pencil once or twice a week. When continued in this way for six or eight months, in early cases, it rarely fails to reduce the circumference of the neck to its natural size, and to permanently secure the quiescence of the gland. In old goitres the most we can hope for is to check further growth, the hypertrophous tissue seeming to acquire, with age, the power to resist the absorbent action of the drugs employed against it.

DOCTOR HICKEY: I recall seeing an amusing account of an error of the pharmacist in the practice of a British physician, where patients had thus progressed beautifully while taking a thymus extract instead of the thyroid extract which had been ordered.

DOCTOR WILLIAMSON: In some cases operation is, undoubtedly, the only treatment. Thyroid extract is undoubtedly a rational remedy and cases prove the benefits of its use, although I noted, in a recent case, marked heart depressant effects.

Doctor Winter: I do not comprehend the rationale of the thyroid extract treatment. There are no cases that I more dislike to see enter my office than those with enlargement of the neck. The use of ointment of the red iodide of mercury is, of course, if at all frequent, attended with a great deal of cutaneous irritation. We have not seen much myxedema as yet here in Detroit, and removal of the thyroid seems to me still a questionable procedure. I should like to ask if it is not common to find, in cases of thyroid enlargement, a very rapid pulse. In one patient I have never found her pulse below 130.

Doctor Chittick: I have used the ointment of hydrargyrum biniodide, reducing, however, the strength of the official preparation to two or three grains to the ounce.

Doctor Robbins: I am obliged to you for the interesting discussion. In a number of cases seen at the clinic at Saint Mary's Hospital, the hypodermic injections of carbolic acid have proven quite effectual. My investigation and work is by no means ended, as yet, nor my conclusions so definitely formed as I hope they will be later. I do not feel that the physiology of this gland is, as yet, at all well understood.

SAGINAW COUNTY MEDICAL SOCIETY.

STATED MEETING, NOVEMBER 6, 1895.

The President, J. L. McLAREN, M. D., in the Chair.
Reported by S. C. J. OSTROM, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Samuel E. Campbell read a paper entitled "Rectal Ulceration." (See page 536.)

Doctor Sample: I have always found it an intractable disease. In many cases operation is necessary. In rectal ulcer, the application of red oxide of mercury ointment is an excellent remedy. In fissure, stretching and cauterization are unsatisfactory. Perhaps Whitehead's operation gives the best results.

Doctor Kanzler: It is not always easy to discriminate between varieties of rectal ulcers, nor is it really necessary. It is a question of relief and cure. In one case I thought very simple I tried palliative measures for several months without any good results. I finally made an operation and a complete cure followed. It is now three years since the operation and the patient is in the best of health. I do not know what kind of ulceration it was, but I do know the operation cured him.

Doctor Davis: I believe rectal ulcers are frequently overlooked. In female the symptoms are attributed to the uterus, or bladder, and in males to th bladder. Patients are sometimes subjected to systematic treatment for year for urethral, bladder, or uterine disease when the attending physician has neve once thought of the existence of a rectal ulcer. The patient, very often, i questioned on the subject of rectal troubles, is indignant. A very interestin case bearing on this point comes to mind. A woman called on me who ha been treated for years, at short intervals, for urethral and bladder trouble. She had great confidence in her regular family physician. He was a first-class man, and she would not admit that any trouble rested in the rectum. She almost considered the suggestion an insult to her former attendant. I made an examination of the rectum and the speculum revealed a very large ulcer, the size of a silver dollar. It was thoroughly scraped and the cure was complete. She has had no bladder trouble since. I do not believe in palliative treatment, nor do I think the application of nitrate of silver, or nitric acid necessary after thorough scraping. A digital examination may reveal the existence of disease but the speculum decides its nature and prompts the treatment.

Doctor McLaren: I agree with the reader of the paper in regard to many rectal ulcers being overlooked. Many obscure symptoms are treated without results because a small rectal ulcer has been undiscovered. Let me relate a case bearing on this point. The patient was very much annoyed by pain, sometimes very severe, in the right testicle and cord. During my absence from the city he passed into the hands of other physicians and received a variety of treatment but with no relief. I saw him again upon my return. He was a great sufferer and thoroughly discouraged. I suggested an examination of the rectum but he refused as he knew he was all right in that region. The examination was made, however, and I found a small rectal ulcer, no larger than an orange seed. An application of nitrate of silver—twenty grains to the ounce—gave great relief and the second application made a complete cure. Syphilitic ulcers are very common and in most cases stricture accompanies them. I believe hemorrhoids to be the most common cause of rectal ulcer. In regard to treatment I rely upon the application of argentum nitras, or nitric acid, and keeping the bowels open.

Doctor Campbell: In closing the discussion I will only add a few words. I have endeavored to point out some cardinal principles regarding the different varieties of ulceration. Only in chronic cases are the symptoms misleading and in most cases the finger is sufficient for diagnostic purposes.

STATED MEETING, NOVEMBER 20, 1895.

The President, J. L. McLAREN, M. D., in the Chair.
Reported by S. C. J. OSTROM, M. D., Secretary.

DISCUSSION OF PAPERS.

Doctor Small read a paper entitled "Alopecia Areata." (See page 544.)

Doctor Ostrom: This is a practical paper on a very undesirable disease. I am afraid the general practitioner pays very little attention to diseases of the hair and scalp. It is a department of medicine almost exclusively in the hands of the barber and the druggist. When a physician is threatened with "wig-wearing" he becomes a close student of alopecia areata; even goes off on a junketing tour to Europe and returns showing the true effect of his trip in a luxuriant growth of hair. Alopecia areata has no relation whatever to general alopecia. The spots are large or small, circular or irregular, sometimes running together in one large patch or streak of baldness. It is a tedious, unsatisfactory disease to treat, and yet judicious treatment tends to cure. It lasts sometimes two or three years, and when apparently cured may recur. It no doubt depends upon some functional nerve derangement and demands tonic treatment. I agree with the writer of the paper in the treatment he has outlined.

DOCTOR DAVIS: I recall one case treated by me some years ago. The patient was ten years old, in good health, had no previous sickness, and no especial cause of the alopecia could be found. Three quite large spots appeared on the head. Internally I gave tonics, and externally stimulants like cantharides, chloral, et cetera, and recovery was complete.

DOCTOR J. M. CAMPBELL: I will say I have paid some attention to the treatment of skin diseases, and my experience is that the parasitic treatment in alopecia areata is not good. Nor do I find galvanism of any use. Authors differ regarding the origin of the disease. I believe it to be of neurotic import and give tonic treatment because the patients get well.

DOCTOR STEWART: My experience in this disease in private practice is limited. I have seen a number of cases in the hospital. The case presented to the society came to me some time ago. It has been in progress for six months. The patient otherwise is in good health. He has complained of soreness at the region of the baldness. I have tried constitutional and parasitic remedies. The progress of the disease has stopped. I believe alopecia areata to be of neurotic origin. Treatment generally is unsatisfactory.

DOCTOR SAMPLE: I have had very little experience in this disease. I saw the case referred to by DOCTOR SMALL and the results of treatment in his case were very good.

DOCTOR SMALL: One can readily see how some confusion in regard to etiology might arise from mistaking alopecia areata for tricophytosis capitis, and *vice versa;* but aside from the bald areas of a somewhat circular shape the two affections possess little in common. The sudden onset of the one, its perfectly smooth appearance, and absence of pruritus being in sharp contrast to the slower advent, scaly surface and pruriginous character of the other.

EDITORIAL ARTICLES.

HEREDITY AND MARRIAGE.

How to overcome some of the beneficent effects of medical science is part of the theme discussed so admirably in a paper from the pen of DOCTOR DENISON, of Denver, appearing in a recent number of *The New York Medical Journal.* The advance of the healing art has led to a suspension of the law of natural selection and permitted the weak to propagate their kind. The importance of being well-born is more and more important as civilization advances. "What a man is, he is potentially at birth; whatever can be added by himself is at best but an infinitesimal fraction comparable with what he derived direct from his parents or indirect from his earlier ancestry." This is perhaps giving the WEISSMAN theory an unearned significance over the doctrines of DARWIN, but it serves to point the moral. The action of the microbe in securing the survival of the species by natural selection must be replaced by the selection of choice—by intelligent human selection. The causes of degeneration must be prevented by better marriage arrangements.

It is asked, "Cannot science be made to aid or displace sentiment in mating the sexes." Would this be desirable? Can there not be concessions from both sides? Cannot science and sentiment occasionally join hands? If the laws of heredity be well understood, if education be directed to giving a perception of what is fundamentally important, will not sentiment range itself in line, and marriage, with the congenitally defective be, from intuitional reasons, as unusual as marriage with the mulatto?

Is there not, also, some misconception regarding the vulnerability of advanced peoples, or their liability to disease? The civilized are found to possess certain biological characteristics. The most significant of these characteristics is that over their less civilized progenitors they show diminished fertility. This is accounted for by the diversion of energy to other fields, particularly in the direction of intellectual pursuits and endeavors. Civilized man, however, is not any more susceptible to annihilation by the microbe than his simpler ancestors. Considering the wider range of his effort and his experience he has cultivated a high resistance-power. The colored races are far more susceptible to the ravages of tuberculosis and syphilis, when they come in contact with the infecting cause of those diseases, than are the white races. It is indeed doubtful, especially with our present knowledge of immunizing processes, whether the observance of a strict hygienic marriage code, or the selection of partners whose ancestors revealed absolutely pure strain, would in the end evolve a race capable of resisting the invasion of the microbe. On the other hand might it not be possible that we might best expect to find ultimate physiological immunity in those whose ancestry showed a successful repulse in later generations of the microbe infecting its earlier representatives. In other words, if we ever reach a physiological immunity to tuberculosis, will it not be gained through the serum of those who have fought the microbe, rather than in the blood of those who have never been subject to its action. Heredity and the problems dependent upon it are too extensive to be included within the bounds of a single definition.

Doctor Denison's "rules of choice" for those contemplating matrimony are admirable in every way, in harmony with present experience, and in accordance with the laws of heredity as understood. These laws as at present accepted are, however, not reconcilable with current notions of immunity, and one or the other will be subject to future modification.

EDITORIAL BREVITIES.

THE MORTALITY OF MEDICAL MEN.

Doctor Kortright, in a recent number of *The Brooklyn Medical Journal*, gives some impressive and suggestive facts in reference to the causes of death in medical men. The rate of mortality among four hundred and fifty physicians who lived in New York and Brooklyn was only exceeded by saloon keepers, butchers, quarrymen and poor factory operatives. The average age of death was 54.6 years, and the mortality was 25.53 as compared with a mortality of 15.53 in clergymen, and 20.23 in lawyers. Arterial sclerosis was the most prominent cause of death, reaching as high as 35 per cent. *The British Medical Journal* commenting on these figures deduces certain practical conclusions, the most important of which are, that the physician should take at least three weeks rest during the course of the year; that he should be extremely moderate in the use of stimulants; that his meals should be taken regularly; that if his health begins to fail he should give up night work; that he should regulate his work by careful method; and that he should insure himself against sickness and injury. All of which he will probably continue not to do.

HEMOGLOBIN AND SLEEP.

INTERESTING observations made at the City Hospital of Baltimore determine the changes taking place in the blood during the unconsciousness of sleep and chloroform narcosis. During sleep it is found that, by estimations made with FLEISCHL'S hemometer, the amount of hemoglobin is diminished in sleep just as in artificial narcosis. Something has been done towards determining the pathology of sleep.

COFFEE-DRINKING.

THE habit of coffee-drinking is so universal, and has so few deleterious effects, that little attention is usually given to those who find it a cause of harm. Occasionally in a neuropathic subject unpleasant results follow its use, but these are so few that it is unlikely the popular beverage will ever be dethroned from public favor. M. GILES DE LA TOURETTE has recently published an article upon the harmful effects of coffee on the race. He thinks that coffee intoxication frequently occurs, but the condition is not recognized from being confounded with alcohol. Coffee gastritis is usually confounded with alcoholic symptoms. Many nervous disturbances are also attributed to the use of coffee, notably insomnia. Taken in moderation it seems admitted, however, that coffee has none but desirable effects.

THE COLD-BATH TREATMENT OF TYPHOID.

THE five years' experience of DOCTOR OSLER with the cold-bath treatment of typhoid is interesting. During the first year of his hospital service typhoid fever was treated symptomatically. The number of severe cases was unusually large and there were eight deaths only out of thirty-three patients, a mortality of 24.2 per cent. For the past five years systematic hydrotherapy has been practiced, each patient receiving a tub-bath of twenty minutes at 70° Fahrenheit every third hour when the rectal temperature was 102.5°. During the practice of hydrotherapy the percentage of mortality has only been 7.3, the true statistics of the strict hydrotherapy reaching a mortality of but 6.6. The cold-bath treatment, it is claimed, will save from six to eight in each hundred patients suffering from typhoid fever admitted to the care of hospital physicians.

MEDICAL NEWS.

A HIGH MEDICAL STANDARD.

THE first annual meeting of the Utah State Medical Society recently convened at Salt Lake City. About fifty of the representative members of the profession in that commonwealth were present, and an expression of sentiment on the question of medical education resulted in evolving the following resolution: "That it be the sense of this society that every member of it interest himself personally in securing the election of men for the next legislature who favor the maintenance of a high standard of medical excellence in the State of Utah, and that he continue to use his influence."

A TESTIMONIAL BANQUET.

Doctor John S. Billings, who recently retired from the Directorship of the Army Medical Museum, and the Librarianship of the Surgeon-General's Office, has been presented with a purse of $10,000 by physicians in recognition of valuable services rendered the profession in issuing the "Index Catalogue." The presentation occurred at a banquet tendered Doctor Billings at the Hotel Bellevue, in Philadelphia, on the evening of November 30, Doctor S. Weir Mitchell delivering the testimonial which was enclosed in a silver box bearing this inscription: "To John S. Billings, from 259 physicians of the United States and Great Britain in grateful recognition of his services to medical scholars." A statement in Latin was engraven upon one side of the box to the effect that he who has prepared a catalogue of a great library has created a memory of the wisdom and learning of the past.

AN ORGANIZATION WITH A LITERARY AND MEDICAL REQUIREMENT.

On November 6, 1895, the Saint Louis Academy of Medical and Surgical Sciences was organized. The constitution of the society subscribes to the code of ethics of the American Medical Association. The membership is limited to fifty. No one is permitted to affiliate with this organization unless he possesses a good literary and medical education. As evidence of his literary qualifications and ability as a scientific worker he must deposit with his application, a thesis, a pathological specimen with descriptive text, a drawing of a normal or abnormal specimen with text, or some other evidence of his worth. The evidence is passed upon by the committee on credentials. If the evidence is accepted, the ballot is taken. Two negative votes will defeat a candidate. The following officers were elected for the ensuing year: President, Doctor George W. Cale, Jr.; senior vice-president, Doctor James Moores Ball; junior vice-president, Doctor Arthur E. Mink; secretary, Doctor Emory Lanphear; treasurer, Doctor Wellington Adams; orator, Doctor Thomas O. Summers; curator, Doctor George Howard Thompson.

A MEETING OF RAILWAY SURGEONS.

The New York State Association of Railway Surgeons convened in New York City on November 12, under the presidency of Doctor R. S. Hardin. The erection of a system of railway hospitals upon the cooperative plan was advocated, the building fund to be amassed from subscriptions by the employer and contributions by the employe, one per cent. of the monthly salary of the latter being the apportionment specified. The transportation of persons suffering from contagious diseases was considered, and instances cited of the loss of life consequent upon the careless practice. The American sleeping-cars were criticised, and the probability of germs lurking upon the draperies, et cetera, was indicated. It was suggested that isolation cars be introduced for transporting infectious cases, and that these cars contain compartments similar to those of the quarantine or operating wards in a hospital. Strychnine was recommended for shock in preference to whisky or brandy. The following were elected officers for the ensuing year: President, Doctor C. S. Parkhill; first vice-president, Doctor J. F. Valentine; second vice-president, Doctor J. K. Stockwell; secretary, Doctor C. B. Herrick; treasurer, Doctor Theodore S. Mills; chairman of the executive board, Doctor George Chaffee.

CHARITY AND STARVATION.

Dublin has a population of 356,240. It has 27 dispensaries in which 100,216 persons are treated annually, 24 hospitals in which 36,412 are treated during a like period, and in addition to this large contingent there are about 4,674 women annually who receive free attendance during confinement. This is sweet charity with a vengeance. Over in France is a physician, whose entree to the Legion of Honor had been won by devoted service during a cholera epidemic, and his beloved wife, recently elected suicide as a prophylactic against starvation. The moral in this case is macroscopic.

A STATE BOARD OF UNDERTAKERS.

In Pennsylvania there is a State Board of Undertakers, and systematic examination, registration, and license is required of every person who desires to engage in the business of burying the dead. The applicant for a license must produce evidence of moral character, possess sufficient knowledge of sanitation, preservation of the dead and disinfection of body, apartments, clothing, and bedding to properly deal with infectious or contagious cases. Here in Michigan numerous efforts have been made to bring about a legal enactment that would require this knowledge of persons desirous of ministering to the physical condition of the living but they have invariably been confronted with successful opposition.

PASTEUR'S RECORD PERPETUATED.

The scientific record of the late M. Pasteur has been accorded a befitting recognition from the Paris Municipal Council. This body recently placed an elaborate marble tablet in the old laboratory of the Ecole Normale in Paris to perpetuate the discoveries of the great benefactor. It bears the following inscription:

ICI FUT LE LABORATOIRE DE PASTEUR.

1837—Fermentations.
1860—Generatione spontanee.
1865—Maladies de vins et de bieres.
1868—Maladies de vers a soie.
1881—Virus et vaccins.
1885—Prophylaxie de la rage.

A NEW METHOD OF INDUCING ANESTHESIA.

Two physicians in New York City are endeavoring to evolve a more satisfactory anesthetic than any at present in vogue. The aim is to obviate the distressing and nauseating symptoms which now accompany and follow the condition of anesthesia, and the experimenters believe this desideratum can be accomplished by a proper combination of pure oxygen and ether. Insensibility caused by this substance does not necessitate the administration of stimulants to prevent debilitation of the system or possible fatal termination. Under its influence the extreme pallor or suffusion of the face are not present, and there is no perceptible weakness of the respiratory or cardiac mechanism. Notwithstanding the new process has been employed in several operation cases with perfect success, the physicians decline to have their names made public until the practicability of their discovery has been thoroughly demonstrated.

THE STAFF OF THE DETROIT DEACONESS HOSPITAL.

THE following physicians were recently appointed to serve on the staff of this hospital: President, Doctor E. B. Smith; vice-president, Doctor G. A. Kirker; secretary, Doctor J. F. McPherson; consulting surgeons, Doctors Donald Maclean, H. O. Walker, A. W. Ferguson (of Chicago); attending surgeon and operative gynecologist, Doctor E. B. Smith; consulting physicians, Doctors P. Klein, G. A. Kirker, C. Brumme; attending physicians, Doctors L. C. Newton, T. M. Lawton; consulting oculist and aurist, Doctor G. E. Frothingham; attending oculist and aurist, Doctor L. E. Maire; gynecologist and obstetrician, Doctor J. F. McPherson; consulting gynecologists and obstetricians, Doctors C. H. Leonard, N. W. Webber, E. W. Jenks; consulting neurologist, Doctor J. E. Emerson; attending neurologist, Doctor D. J. Parker; physician for throat, nose, and chest, Doctor M. McColl; assistant physician, Doctor J. H. Greenwood; physician for children's diseases, Doctor J. F. Bennett; bacteriologist and pathologist, Doctor E. W. Tonkin; board of directors, officers of the staff, exofficio, Doctors L. E. Maire, D. J. Parker.

A TALE CONCERNING TELEPATHY.

DOCTOR LUYS, of Paris, recently advanced the wonderful theory that the thoughts and impressions of the human brain can be transferred from one person to another by the medium of magnetized iron. To demonstrate this curious hypothesis a woman patient who manifested melancholia with a mania for self-destruction was made the subject of experiment. Her head was snugly encased in a crown or circular band of magnetized iron for a fortnight, and the phenomenal success attending the procedure henceforth guaranteed the most perfect freedom of the patient, without danger, the crown having "absorbed" her abnormal tendencies. Two weeks later the same crown, which meanwhile had been preserved free from contact, was placed upon the head of a male patient suffering from hysteria complicated with frequent periods of lethargy. The patient was then subjugated to hypnosis and immediately comported himself after the manner of the woman who had previously worn the crown, practically assuming her personality and uttering precisely the same complaints experienced by the woman before her accession to the crown. Other cases are said to have responded favorably to this new therapeutic measure, and it was demonstrated that the acquired impressions were retained in the crown until it was made red hot.

A NEW RECTAL IRRIGATOR.

A DOUBLE-CURRENT rectal irrigator has been invented by Doctor Robert C. Kemp, of New York. It is a tube about five inches long made of hard or soft rubber. The hard rubber irrigator has a conical end, is shaped like a rectal bougie, and invested with two openings, one on the upper surface just posterior to the tip, through which the entering current passes into the bowel; the other on the lower surface about half an inch posterior to this point, and somewhat larger, for the passage of the return current. A rubber cap, which screws in place, closes the outer end of the tube. This cap is perforated by a longitudinal tube, the inner end of which connects with the channel in the main tube designed to conduct the entering current into the bowel; the outer end is finished with a tip for attachment to a fountain syringe. The outer end of the channel in the main tube through which the return current flows is connected with a short curved tube which is screwed into the lower part of the cap. This tube has an attachment for a soft rubber tube to accommodate the outflow. The soft rubber irrigator has a hollow hard rubber tip. The entering current is conducted into the bowel through a small hard rubber tube which passes through the centre of the soft tube and is screwed into the hollow tip. The return flow passes out on all sides of the central tube, but there is a separate channel, as in the hard rubber irrigator, so that even should the sphincters contract, escape will not be prevented. The outer cap is fitted with two hard rubber tubes, as in the other irrigator. The hard rubber tube is the more durable, but the soft rubber tube is especially adapted to those cases in which the former produces much pain.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

THE eighth annual meeting of this organization convened in Washington City on November 12, Doctor L. McLane Tiffany in the chair. An address of welcome was delivered by Doctor S. C. Busey, who solicited the cooperation of the members in an effort to secure the protection of the people of the District from charlatanry. In considering the status of medical affairs in this federal domain, the doctor said: "To state the deplorable condition of this District fully and broadly, there are five medical schools and several medical societies chartered by acts of Congress, or under the general incorporation law authorized and empowered to license persons to practice the art and science of medicine, without any uniform, and, by some, without any standard of qualification beyond the ability and willingness of the applicant to pay the required fees or give promissory notes for such payment; and, under the provisions of the general incorporation law, any dozen of persons can obtain a charter upon payment of the fee for recording the same, authorizing them as a body corporate to confer the degree of M. D. at their pleasure and will. Such is the status of this federal territory, which is under the exclusive jurisdiction of the highest tribunal of legislation in the land, made up of the representatives and senators from forty-nine states and territories, which have enacted medical practice laws for the protection and welfare of their citizens. Take these facts home with you, and re-echo them throughout the length and breadth of the land, that such criminal neglect, not less disgraceful and scandalous than the slums of vice, may not continue to afflict the citizens of the federal territory." Official duties for the ensuing year will devolve upon the following: President, Doctor E. S. Lewis, of New Orleans; first vice-president, Doctor Joseph Taber Johnson, of Washington; second vice-president, Doctor Richard Douglas, of Nashville; secretary, Doctor W. E. B. Davis, of Birmingham, Alabama; treasurer, Doctor A. M. Cartledge, of Louisville.

MINOR INTELLIGENCE.

THE INDEX MEDICUS will be resuscitated.

PHENIX, Arizona, has an antinoise league.

THE Virginia Hospital at Richmond will soon be enlarged.

THE country physicians in France are using horseless carriages.

DOCTOR A. J. ERWIN, of Mansfield, Ohio, has invented a new septum forceps

THERE are 2,922 medical men residing in Paris, 521 of whom are foreigners.

AT the recent election in Ohio eight physicians were chosen for the legislature.

A WOMAN has been appointed house physician to a Vienna Hospital, Officierstochter Institute.

A PARISIAN woman recently gave birth to a child whose eyes peep out from the top of its head.

A SIMPLE adjustable trial frame has been invented by Doctor F. W. Marlow, of Syracuse, New York.

THE careless dispensing of a drug clerk in New Haven, Connecticut, recently caused the death of a patient.

PROFESSOR KONIG, of Gottingen, succeeds the late Professor Bardeleben in the chair of surgery at Berlin.

THE attending physicians and surgeons of the New York hospitals have formed a hospital organization.

A MULTIPLEX stethoscope, for class demonstration, has been devised by Doctor A. M. Corwin, of Chicago.

THE Detroit Board of Health has provided for free antitoxin treatment of poor persons afflicted with diphtheria.

DOCTOR JOHN RIDLON, of Chicago, has been appointed orthopedic surgeon to the Michael Reese Hospital of that city.

THERE has been a union of the Practitioners' Club and the Doctors' Club in Chicago under the title of the Physicians' Club.

DOCTOR J. B. RUSSELL, senior medical officer of Glasgow, has been granted six months leave of absence on account of sickness.

DOCTOR GEORGE W. STONER, recently Marine Hospital Surgeon in Detroit, has sailed for Europe. He will be absent several months.

AT the recent meeting of the State Board of Charities at Flint, Doctor E. W. Jenks read an interesting paper on "Criminal Atavism."

NEARLY one-half of the meat consumed by the people in the larger cities of Germany is horse flesh. It is sold at about seven cents a pound.

DOCTOR GEORGE W. FRAKER, of Richmond, Missouri, the noted insurance swindler, is sick in bed of Bright's disease in the Ray county jail.

PROFESSOR RAOULT, of Grenoble, has been awarded the prize of the French Institute for his researches in chemistry. It amounts to 12,000 francs.

GREAT BRITAIN and Ireland succeeded in producing one medical man who subscribed to *The Index Medicus*. His name is Mr. Young J. Pentland.

SIR HENRY THOMPSON, surgeon, lately received a legacy of $500,000 from a patient, and now the dissatisfied heirs are trying to nullify the bequest.

ANTITOXIN is now exempt from duty. The Board of United States General Appraisers at New York have decided that it is vaccine virus and entitled to exemption under paragraph 664, act of August 28, 1894.

DOCTOR J. W. CARHART has written a novel on the inversion of the sexes. The story is entitled "Norma Trist," and is based on the Alice Mitchell episode.

AN improved syringe for infiltration anesthesia has been devised by Doctor Bransford Lewis, of Saint Louis, Missouri. It has blunt-pointed German silver needles.

MONTPELLIER, France, has declared that the grocers and butchers of that town must not deliver articles of food unless wrapped in clean uncolored wrapping paper.

DOCTOR EPHRAIM W. BULL, of Concord, New Hampshire, who recently died at the ripe old age of ninety years, was the discoverer of the famous Concord grape vine.

MR. MAHON, a representative from Pennsylvania, has introduced a bill in congress providing for the establishment of a Bureau of Public Health in the Treasury Department.

THE people of Great Britain consume between six and seven million pills daily. Supposing these round masses to average three grains each, they would aggregate a ton in weight.

ANARCOTINE is an alkaloid of opium. Doctor William Roberts is authority for the statement that, as an antiperiodic, it ranks next in value to quinine. It does not possess narcotic properties.

PROFESSOR C. P. FROST, M. D., of Dartmouth Medical College, has been reappointed a trustee of the Asylum for the Insane at Concord, New Hampshire. This is the doctor's fifth consecutive term.

THE Sir Andrew Clark Memorial Fund has proved a failure. The memorial was to assume the form of an isolation ward for contagious diseases, and the purpose had a depressing effect upon enthusiasm.

THE Louisville Surgical Society recently held a meeting in memory of the late Doctor Edward R. Palmer. Eloquent tributes to the deceased were delivered, and letters of sympathy and regret were read.

THE Army Temperance Association is an institution in India. The names of twenty-four thousand English soldiers are engrossed upon its rolls. This is the showing made in an army of seventy thousand.

DOCTOR J. EDWIN MICHAEL, of Baltimore, dean of the University of Maryland, died of Bright's disease on the 2d instant, aged fifty-two years. At the time of his demise he was president of the Medical and Chirurgical Society of Maryland.

THE medical department of the University of Pennsylvania has 819 students this year, an attendance of four more than last year. There are 250 in the freshman class, and the upper classes include about fifty from other medical colleges.

THE Pepper Laboratory of Clinical Medicine, the new laboratory for the University of Pennsylvania, was formally dedicated on the 4th instant. Doctor J. S. Billings presented the building to the University in the name of Doctor Pepper, and the principal address was delivered by Doctor W. H. Welch.

Doctor John J. Sweetland, of Mottville, Michigan, recently experienced a murderous assault on his life. A fiend threw a bomb through the office window, and although the doctor escaped injury, a patient was seriously hurt by the deadly missile.

The new French ministry includes three representatives of the medical profession—Berthelot, Combes, and Viger. The first named is minister of foreign affairs; the second is minister of agriculture; and the third is vice-president of the senate.

M. Duclaux, the former subdirector of the Pasteur Institute, has been unanimously chosen to succeed M. Pasteur as director. The appointee has been connected with the Institute since its establishment. The subdirectorship will be filled by Doctor Roux.

The Pennsylvania State Pharmaceutical Examining Board recently convened in Philadelphia. Out of 172 applicants for license to pursue their vocation, only twenty-seven passed the examination. Of this number sixteen received qualified assistant's certificates, and eleven received registered pharmacist's certificates.

A bill prohibiting the sale of milk containing tubercle bacilli will be submitted to the legislature of New York by the State Board of Health. A clause in the bill requires that milkmen produce evidence that their cows are non-tuberculous, said proof to consist of a certificate issued by the board or its representative.

Doctor W. O. Roberts, of Louisville, who was proceeded against for $20,000 damages, recently experienced a vindication by having the suit thrown out of court. Another Louisville physician, Doctor L. S. McMurty, who was sued for $5,000, has been awarded a counter-claim of $500 by the jury for services rendered the plaintiff.

The Michigan State Board of Pharmacy recently convened in Lansing and examined sixty-six candidates for pharmacist's certificates. Only fifteen were qualified to pass the examination, but ten others were granted certificates entitling them to serve as assistants. The next meeting of the board will be held in Detroit sometime during January.

Doctor L. M. Phillips, of Penn Yan, New York, is writing another novel. The success which attended "Miskel" has prompted the issuance of a story the scenes in which are laid in the east and the west. It will delve into the mysteries of telepathy, and the phenomena of clairvoyance, clairaudience, and psychometry will be accompaniments to the plot.

New regulations concerning medical degrees have been inaugurated in Russia. The degree of Doctor of Medicine will henceforth be regarded as belonging exclusively to the scientific grades of professional calling, and can only be taken after the diploma entitling to practice has been held three years. The candidate must write a thesis of medical import within five years from the time of submitting to the examination, and in the event that this obligation is not fulfilled another examination will be required. It is thought that the innovation will have a tendency to encourage specialism.

At the recent dairy show in New York cows were milked by machinery. The ingenious device obtains its power from a pulsating vacuum, imitating the sucking of a calf, which is created by an air-pump in a series of pipes connected by rubber caps to the cow's teats. Ten cows were milked at once, the time consumed in milking being from three to five minutes.

A new pump and cautery has been devised by Doctor Charles Graefe, of Sandusky, Ohio. It is made of brass, is four inches long, and three inches in its other dimensions, and weighs less than two pounds. Many advantages are claimed for this instrument. It relegates benzine and the alcohol lamp, and obviates the clogging incident to the Paquelin burners.

It has been decided that the Huxley memorial should materialize in the form of (1) a statue to be placed in the Natural History Museum, of London; (2) a medal in connection with the Royal College of Science; and (3) that the surplus should be devoted to the furtherance of biological science, the manner to be determined by the committee, dependent upon the amount collected. The sum of £554 has already been promised and received.

A new self-retaining automatic retractor has been devised by Doctor J. T. R. Roeloffs. It is especially adapted for the surgical armamentarium of the general practitioner, inasmuch as the assistant can be dispensed with. It "consists of a strong steel spring, the tension of which may be regulated by a screw the one end of which is articulated with the left spring shank of the retractor, while the other end slides in an opening of the right shank."

Sir Christopher Nixon, of Dublin, physician to the Mater Misericordiæ Hospital in that city, was recently tendered a dinner in celebration of his accession to knighthood. The large company present embraced many members of the profession, and in responding to a toast Sir Christopher said the honor paid him on that occasion was the greatest reward of his life. Irish and English physicians are becoming famous for winning laurels in other fields than medicine.

Medical fees have recently been regulated by governmental edict in Germany. An ordinary visit is scheduled at twenty marks, which amount may be increased two or three marks in cases requiring examination of any internal organ. A prolonged visit is recompensed at the rate of three marks for every half hour commenced. Night visits are quoted at double, and even triple, the foregoing rates. An urgency visit is valued at double the amount of an ordinary visit.

Frederick Stearns, the senior member of the enterprising pharmaceutical firm of Frederick Stearns & Company, has again substantially manifested his generosity and public-spiritedness. Some time ago he presented a $600 scholarship to the pharmacy department of the University of Michigan, an account of which appeared in this journal. His last benefaction is in the form of a loan to the Detroit Museum of Art, and consists of about 5,000 curios from every quarter of the globe. This valuable collection of archaeological and ethnological objects is geographically classified and arranged in table and wall cases, each article bearing a typewritten descriptive label. This collection supplements a collection of oriental art objects donated to the Detroit Museum of Art in 1889 by the collector.

The right to practice medicine and surgery in Germany is vested in those only who possess a State diploma. Henceforth the degree of Doctor in Medicine will not be conferred upon students until they have passed ten half-year periods of study instead of nine as heretofore, successfully withstood the State examination, and afterward attended the practice of a large hospital for one year. It will be observed that the clinical feature is supreme in German medical education.

The Queen Margaret College of the Glasgow University recently dedicated the anatomical and histological laboratories erected for the women medical students of that institution. The dissecting room is 48x28 feet, and lighted from the roof. A dado of white tile runs in the walls, and above it a blackboard is built all around the room. The wall above the blackboard is of adamant plaster. The room is provided with wash basins, sinks, lifts, et cetera, and has all the modern equipments.

Doctor S. L. Wyszynski, of Detroit, was accidentally killed while attempting to cross a railroad in that city on the 21st ultimo. The deceased was born in a province of Russian-Poland in 1854, and received his medical education at Warsaw and Saint Petersburg. He came to America four years ago and located in Chicago. After practicing in that city for two years he moved to Detroit, where he has been a successful physician in the Polish district. A wife and four daughters survive him.

The New York School of Clinical Medicine is the title of a new institution recently established in the American metropolis. Only clinical instruction will be dispensed, and in pursuance of the practical feature each matriculant will be appointed an assistant and given opportunity to personally attend cases under the direction of the teachers. The school is modeled after the Berlin Docenter Verein, and its faculty includes physicians who have been connected with the leading hospitals of the city.

The Iowa State Association of Railway Surgeons held its annual meeting at Des Moines, on October 10. The report on accidents to railway employes contained the information that one employee for every seventy-nine is injured, and one for every six hundred is killed. Doctor C. W. Coyt, of Missouri Valley, was elected president. Other officers chosen are: vice-president, Doctor B. H. Criley, of Dallas Center; secretary, Doctor A. A. Deering, of Boone; treasurer, Doctor D. S. Fairchild, of Clinton.

Doctor J. E. Clark, of Detroit, is advocating the establishment of an independent medical department as a feature of the state militia. The medical service now in vogue has imperfections which seriously affect its efficiency, and the change is proposed to obviate their perpetuation. Medical officers are appointed by the colonels of regiments, and are only responsible to superior line officers. Hospital stewards, who dispense medical supplies, receive their appointment from the same source. The brigade surgeon, the ranking medical officer of the state, is appointed by the brigadier general, and his power of control is determined by the obedience of subordinate medical officers. The scheme suggested by Doctor Clark contemplates a medical department similar to that in New York, Indiana, Wisconsin, and other states, with a medical officer in charge whose power shall be supreme.

Doctor **Frank Allport**, of Minneapolis, has devised an aural masseur. It consists of a piece of thick rubber tubing, about one yard in length, its centre being connected by a piece of glass tubing, in which is inserted a bit of cotton to prevent the passage of any matter between the patient and physician. One end of the tube is held in the physician's mouth and the other end is inserted into the patient's meatus. Massage is performed by suction force, a vibratory movement of the drum-head and ossicles being produced which may be regulated as desired.

The Executive Committee of the Congress of American Physicians and Surgeons held a meeting in New York on November 23, and elected the following officers for the Congress: President, Doctor William H. Welch, of Baltimore; secretary, Doctor William H. Carmalt, of New Haven; treasurer, Doctor Newton M. Shaffer, of New York. Officers were then elected for the Executive Committee as follows: Chairman, Doctor Landon Carter Gray, of New York; secretary, Doctor William K. Simpson, of New York. The next Congress will convene in Washington City, in May, 1897.

Doctor **T. C. Minor**, of Cincinnati, recently made the mistake of taking belladonna for bromide of potassium. Feeling nervous and debilitated he swallowed the medicine and assumed the recumbent posture to rest. His condition became rapidly worse, and suspecting that the wrong medicine had been ingested he arose to examine the bottle, when his suspicions were confirmed. Hurrying across the street to a restaurant he imbibed several cups for strong coffee, a big drink of brandy, and then supplemented these agencies with an emetic, which insured recovery.

The persuasive power exercised by the cannon-ball in forcing an evacuation of the bowels is not considered by Doctor Douglas Graham so effective as resort to fistic force. For habitual constipation this gentleman recommends that patients percuss and pound their abdomens for a few minutes, morning and evening, with the inner border of their fists, and that the siege of attack be especially directed toward the ascending, transverse, and descending colon. Friction and deep kneeding may be brought into requisition when deemed advisable, though these measures are considered more tiresome and less effectual.

RECENT PUBLICATIONS.

REVIEWS.

PRACTICAL DIETETICS.*

Dietetics is gradually but surely becoming recognized the most important therapeutical resource in the treatment of numberless diseases. This valuable work is designed to furnish a text-book in which may be found detailed an appropriate diet for each disease that can be influenced by right feeding. The size and comprehensiveness of the volume entitle it to be considered the best manual that has appeared since Pavy's classical work. The advances made in all studies in alimentation since that day is shown by turning to the pages on milk alone, where we find detailed all the newer ideas regarding the alterations occurring in this food product by microorganisms, the principles of its sterilization and modification.

Part II treats of stimulants, beverages and condiments. Part III and IV treat of the preparation of foods, and the elaboration of dietaries suitable for particular cases and conditions. Part V treats of digestion, elimination, and so forth. Part VI, of disease caused by dietetic errors, and Part VII, of the method in vogue of feeding the sick. Part VIII will be found perhaps the most valuable from the clinical standpoint, as the alimentary management of various acute diseases is there presented. The remarks on obesity, diabetes, and gout are particularly to be commended.

The book is undoubtedly a valuable one, and should find a place in the library of every wide-awake practitioner.

*With Special Reference to Diet in Disease. By W. Gilman Thompson, M. D., Professor of Materia Medica, Therapeutics and Clinical Medicine in the University of the City of New York, et cetera. Octavo. 800 pages. D. Appleton & Company, New York.

CLINICAL LECTURES ON DISEASES OF THE NERVOUS SYSTEM.*

THE lectures contained in Doctor Gowers' new volume were delivered at the National Hospital for the Paralyzed and Epileptic. They illustrate very clearly the change which has come over our knowledge of diseases of the nervous system during the last quarter of a century. The lectures are written in the clear and vigorous literary style characteristic of their author. They are delightful reading, and so lucidly is everything stated, that they will be as readily readable to the general practitioner as to the specialist. The lectures dealing with the spinal cord will be found specially commendable.

*By W. R. Gowers, M. D., F. R. S., Physician to the National Hospital for the Paralyzed and Epileptic, London. Price $2.00. P. Blakiston, Son & Company, Philadelphia.

THE STANDARD DICTIONARY.*

THE many important features possessed by this dictionary bespeak its superiority over other works of similar nature. In seeking the definition of a word in the old vocabularies the consultant is generally confronted by a preface dealing with etymology, but in the work under consideration the definition is given precedence, thereby greatly facilitating research. Another matter of vital consequence is the fact that the most common current meaning of the word is accorded preference the order of usage being first cited, and the historical order afterward. The pronunciation of words has been determined in conformity with the rules of the American Philological Association, and the American Spelling Reform Association, and in cases of disputed pronunciation and spelling the question of propriety has been referred to a committee of fifty philologists in the universities of the United States, England, Canada, Australia and the East Indies. The pronunciation preferred by the authors of this dictionary is supplemented by the system adopted in other works. A very commendable feature is the simplified method of spelling many words. This is especially noticeable in the spelling of chemical terms, the rules adopted by the

Chemical Section of the American Association for the Advancement of Science having been adhered to, and although such words as bromin, chlorin, iodin, morphin, sulfid, et cetera, are spelled with and without the "e," preference is given to the abbreviated form. In like manner the elimination process has been applied to medico-scientific nomenclature of which this work affords an extensive vocabulary, the terms referring to electricity or its multifarious applications alone aggregating about four thousand. Apropos to the discussion that has recently been incited regarding the spelling of the words "symphyseotomy" and "uranalysis," it might be mentioned that while this dictionary presents the former word spelled with both the "e" and the "i," giving preference to the spelling here rendered, yet the latter word is not recognized. Reform is noticeable in the inaccurate practice of compounding words, and a more simple and rational system has been adopted. The work contains five thousand pictorial illustrations prepared expressly for it, some of them being full-page groups in colors.

There are many other distinctive features characterizing the "Standard" which mark a notable advance in dictionary-making. The consultant will find this work a valuable adjunct to reason in estimating the onward march of linguistic evolution.

* The Funk & Wagnalls Company, 30 Lafayette Place, New York. Isaac K. Funk, D. D., Editor-in-Chief. Sold by subscription only. Prices $12 to $24, according to binding. The Fuller Company, Kalamazoo, Michigan, General Agents for Michigan, Ohio, Indiana, Illinois, Wisconsin, Minnesota and Iowa.

LECTURES ON APPENDICITIS AND NOTES ON OTHER SUBJECTS.*

The views held on appendicitis by Doctor Morris have for many years been authoritative, and the profession will gladly have them in permanent form. In the present volume will be found essays upon other subjects of interest, which have appeared from time to time in periodical literature. Every chapter reveals the close power of observation, and the deep clinical grasp of facts, possessed by the scholarly author.

*By Robert T. Morris, A. M., M. D. G. P. Putnam's Sons & Company, New York.

MEDICAL PROGRESS.

GYNECOLOGY.

CHRONIC PARENCHYMATOUS METRITIS.

Perhaps one of the most common of uterine diseases is chronic parenchymatous metritis, and the results of its treatment by the old methods of scarification, applications of iodin and glycerin tampons leave much to be desired. For the relief of this condition Doctor Talley has practiced irrigation of the uterus with one or two gallons of alkaline solution at a temperature of 110° Fahrenheit, using for this purpose a specially devised irrigating tube providing a return flow, and, of diameter, small enough to pass through a number fifteen French catheter gauge. The action of the application of heat and moisture is to cause first vasomotor dilatation, and subsequently vasomotor contraction. The mucous secretions are dissolved and washed away by the alkaline solution, leaving a clean membrane. Following the irrigation, about twenty minims of a mixture of equal parts of Churchill's iodin and carbolic acid are injected into the uterine cavity by means of a Braun syringe, and a cotton tampon, well saturated with glycerin, is tucked neatly against the cervix. This is to support the uterus and to deplete it by the affinity of glycerin for the serum of the blood. Such treatment is applied twice or thrice a week. Conjoined with the local treatment care is given to securing mild exercise, nourishing diet, and the administration of iron, arsenic and strychnine.

This method is only applicable to cases in which the *cervical canal is patulous;* unless such cases are selected, the physician will be embarrassed by severe uterine colic following his treatment.

OBSTETRICS.

THE DIAGNOSIS OF PREGNANCY IN THE EARLY MONTHS.

Landau (*The Deutsche Medicinische Wochenschrift*) believes that the exact estimation of the beginning of pregnancy is not possible as, apparently, the ovulation occurs independently of menstruation. The size of the uterus is in the early months also an unsafe guide. The form and consistence of the uterus is more reliable. It is enlarged evenly and in transverse diameter, so that the anteflexion is increased, the vaginal portion is drawn up, the vagina elongated, and the anterior vaginal wall appears tenser than otherwise. The consistence is softer, the sensation being as though the examining finger was pressing in soft butter, the finger passes in, finds no resistance, and returns no impression. Hegar's sign may be recognized in 30 per cent. of the cases; the same sensation as is perceived by palpating the lower uterine segment may be obtained by palpating the tubal angles. The consistence of the anterior and posterior uterine wall is irregular, usually the anterior is softer and looser than the posterior, which probably has some relation with the attachment of the placenta. In the examination attention should be paid to the fact that one cannot recognize these signs at one time, as the uterine contractions soon occur and interfere. It is necessary to examine frequently. The other usual signs of pregnancy should also be taken into account.

Landau's paper was founded upon over 200 cases of pregnancy, from the third to the twelfth week, and refers only to the normal position of the uterus. —*The Times and Register.*

PEDIATRICS.

SCHOOL LUNCHES.

A prolific source of indigestion, irritability, and anemia among children is to be found in the character of the lunches they eat at school. In the country, where the distances are great, many children are obliged always to take their lunches with them. This too often consists of cake, pastry, and preserves, to the exclusion of more digestible and nutritious food. It is, as a rule, eaten in haste, that time for play may not be encroached upon, and is washed down with large draughts of cold water. Too often such lunches are not adapted to the needs of a growing child, and the haste with which they are eaten adds to their pernicious tendency.

In the city, although the conditions are quite different, the school lunch also plays an important part in depleting the health of many children. Parents are frequently extremely unwise in allowing their children to remain at school during the lunch hour when it is not necessary. They would be far better for the exercise of walking to and from school, as well as for a warm and properly-prepared lunch. Not infrequently the child is allowed to buy his lunch at some neighboring bakery, and a neighboring bakery is a very common accompaniment of a large city school. We were recently passing one of these bakeries just at the lunch hour. It was thronged with school children, chiefly girls from ten to fourteen. A small procession was passing back to the school, each girl with a paper sack in her hand. Being curious to see the character of the purchases, we entered and found without exception that the paper sacks were being filled with cakes or pastry, *chocolat eclairs* being apparently at a premium. The wares of the shop were prepared apparently for the especial purpose of catering to the school trade, and consisted almost exclusively of cakes and small pies designed for lunch purposes.

These girls were at that time preparing for examination and promotion. Some of them were undoubtedly a source of anxiety to fond parents because of listlessness, irritability, and growing anema. If the doctor was consulted, he undoubtedly gave much good advice and prescribed tonics. Advice and tonics would prove, however, equally unavailing on such a diet. A growing and developing girl of fourteen, working hard for promotion, requires something more sustaining between breakfast and dinner than a brace of *chocolat eclairs* or a quarter of a pound of angel cake. The doctor summoned to give advice regarding such a girl, who does not inquire minutely concerning her diet at the lunch hour, may fail to reach a very important factor in the etiology of the case.—*The Archives of Pediatrics.*

MEDICAL MELANGE.

ANALGESIA AND SEDATION: AN ESSENTIAL ADJUNCT TO TREATMENT.

On account of the frequency with which pneumonia in late years is accompanied with grippal symptoms, the treatment, to a great extent, has been modified or changed. The essential features in the result desired are a diminution of the pain and a lowering of the temperature. Opinions differ as to whether a reduction of the temperature influences the course of the disease, but a concensus of opinion is that antipyretic treatment is distinctly called for in the beginning, and an analgesic at all times, if needed to assuage suffering. The antipyretic should be antikamnia, and the analgesic is supplied by codeine and antikamnia together. This is given every three or four hours in tablets containing four and three-quarters grains antikamnia and one-fourth grain codeine, throughout the period of congestion and consolidation. Where there is great restlessness, this will have a delightful effect.

In the nocturnal pains of syphilis, in the grinding pains which precede labor, and the uterine contractions which often lead to abortion, in tic douloureux, brachialgia, cardialgia, gastralgia, hepatalgia, nephralgia and dysmenorrhea, immediate relief is afforded by the use of this combination, and the relief is not merely temporary and palliative, but in very many cases curative.

In the neuroses of the respiratory organs, great relief is afforded by the use of this combination. A paroxysm of asthma is often cut short by a full dose; hay-fever or autumnal catarrh is benefited by its use.

In the harassing cough of phthisis, or in the pain of pleuritis, in the painful sensations accompanying bronchitis when the tubes are dry and irritable—as they usually are—the blending of codeine and antikamnia will not be found wanting in its action, but will give results that are gratifying to both the patient and the medical attendant. As a producer of sleep it will be found efficacious. This is doubly true when there is great nervous excitement.

In pulmonary diseases this combination is worthy of trial. It is a sedative to the respiratory centers in both acute and chronic disorders of the lungs. Cough in the vast majority of cases is promptly and lastingly decreased and often entirely suppressed. In diseases of the respiratory organs, pain and cough are the symptoms which especially call for something to relieve; this tablet does it and in addition controls the violent movements accompanying the cough, and which are so distressing.

This combination is the remedy for diabetes and is superior to any other in diminishing the quantity of sugar in the urine. and also in diminishing the quantity of urine itself in diabetes mellitus. The bulimia and polydipsia are lessened by its use, and probably the changes in the nervous system which accompany or are causative of the disease, are arrested or prevented. It also prevents waste. It controls restlessness; it relieves insomnia; it relieves distressing nervous symptoms. It relieves the craving of the stomach, and lessens the frequency of the calls to urinate.

It is not claimed that the combination will cure diabetes mellitus, but there will be, in many cases, arrest of the disease, with prolonged periods of good health, and cure in some cases.—John J. Sullivan, M. D., University of the City of New York, 266 West Thirty-eighth street, New York City.

A NAIL IN A CHILD'S BRAIN.

A NOVELIST who should say that a nail could be driven into a child's brain and remain there without producing any unpleasant symptoms for thirty-two years would be thought to exceed even the license of the romancer. And yet this fact was revealed in the dead-house of the Metropolitan Hospital at a recent autopsy. Among the daily arrival of patients from the city was a man thirty-two years old, of fair intelligence and apparently well formed, suffering from double pneumonia. In forty-eight hours he was carried to the dead-house, and in accordance to hospital rules in all cases of sudden death, in due time a post-mortem examination was made. As the skull-cap was lifted a nail was found which had passed through the skull and penetrated for three-quarters of an inch into that portion of the brain which is supposed to be the seat of thought. The head of the nail was imbedded in the skull, and covered by the scalp with its full growth of hair, showing that it had passed through the soft portions in babyhood. Inquiry into the previous history of the dead man showed that he was a laborer, had lived all his life in New York, had never suffered until the attack of pneumonia from any special disease, was of usual intelligence, and had never complained of headache, and yet during all these years he had carried this nail penetrating into the brain, the rust when removed staining the surrounding brain cells and scaling when touched with a knife from the nail itself. It was one of the strange revelations which the physician meets in the wards and the dead-house of a great hospital, showing how often truth is stranger than fiction. —*The New York Medical Times.*

CONCEPTION IN THE PUERPERIUM.

Gruber (*Der Frauenarzt*, July, 1894) reports a case which he had under his care last year of a woman, aged thirty-eight years, who had borne children. She was under Gruber's care for abortion at the fourth month. Four months later she consulted him again in regard to her menses, which had not appeared since her miscarriage. Her abdomen had increased in size, and on the night before her visit she had felt the movements of the child. On examination a four months' pregnancy was diagnosed. Nine months after the abortion she gave birth to a fully developed female child. Gruber refers to this as a case of conception during the puerperium.—*The University Medical Magazine.*

THE DAMAGE SUIT.

From a well known legal work we find the following rules have been thoroughly established: (1) A physician or surgeon, without a special contract for that purpose, is never considered as warranting a cure. (2) His contract, as implied in law, is: *a.* He must possess a reasonable degree of learning, skill, and experience, which is ordinarily possessed by others around him, in his profession. *b.* That he will use reasonable and ordinary care and diligence in the treatment of the case committed to him. *c.* That he will use his best judgment in all cases of doubt as to the best course of treatment. (3) He is not responsible for want of success, unless it is proved to have resulted from want of ordinary care and attention. (4) He is not presumed to engage for extraordinary skill, or for extraordinary care and attention. (5) He is not responsible for errors of judgment, or mere mistakes in matters of doubt and uncertainty.—*The Southern Practitioner.*

PREGNANCY WITH UNRUPTURED HYMEN.

Guerard (*Centralb. f. Gyn.*, Number XV, 1895) relates three new cases of pregnancy in which the hymen was persistent. In the first and second there was a protracted second stage due to the resistance of the hymen, which was perfect and very elastic. After crucial incision the fetus was at once delivered, but in one case the child was lost. In the third case the patient appeared to be in the seventh month of her first pregnancy, and suffered from severe pains in the genital tract. Although she had twice been operated on for atresia of the hymen, the vagina was still closed by a firm, impermeable and tender membrane. This was excised, the pains disappeared and the pregnancy continued and ended naturally. Guerard notes a case of bifenestrated hymen where the openings barely admitted a hair; yet the patient reached the third month of pregnancy, and abortion was induced in a manner which could not be ascertained. In considering these cases, he notes how the alkaline uterine mucus, poured out during orgasm, protects the spermatozoa from destruction by vaginal mucus.—*The British Medical Journal.*

PRACTICE.

RESPONSIBILITY FOR UNTOWARD ACTION.

WITH the characteristic pithy and trenchant utterance which "hews to the line letting the chips fall where they may" and which marks all of his sayings, Doctor Frank Kraft, 57 Bell avenue, Cleveland, Ohio, Professor of Materia Medica, Cleveland Medical College, writes: "The professional market seems to be filled with substitutes for the original and ever favorite antikamnia; all warranted to do what the antikamnia has succeeded, by hard work and expenditure of much money, in establishing; all of these nefarious products masking under some name partly modeled after the antikamnia pattern, beginning with an A, and warranted to still pain, et cetera, et cetera, are base imitations of antikamnia. They may be, and perhaps are, coal tar products, but they cannot take the place of antikamnia; this was the first product and made a success because of its merit; hence the host of imitators. Insist upon getting the original antikamnia, and caution your druggist that if he practices any substitution you will not only decline further to deal with him, but hold him personally responsible for any untoward action of his substituted remedy."

THE TREATMENT OF CERTAIN CASES OF INSOMNIA.

IN view of the large number of hypnotics in the materia medica it has become possible for the physician to strictly individualize in his selection of remedies of this kind. This is, however, attended with greater difficulties than in any other branch of therapeutics, for to select the proper hypnotic in any given case requires a careful investigation of the cause and nature of the insomnia. Any effort, therefore, to define more accurately the indications for the various hypnotics is worthy of more than ordinary attention. During the past ten years Doctors H. Breslauer and J. Joachim (*Centralbl. f. d. ges. Therapie*, August, 1895) have made a thorough study of this subject and the following represents the outcome of their observations with regard to the therapeutic indications of trional. If employed in the proper manner they consider this drug as among the best and least injurious of hypnotics. Administered in doses of 1.0–1.5 grammes it produces a quiet sleep of six to eight hours duration, the awaking from which is not, as a rule, attended with disagreeable after-effects. During its continued use the dose should not exceed 2.0 grammes and a large single dose acts more effectively than repeated smaller doses. It is best given in 50 to 100 grammes of boiling water with addition of syrup rub idaei although it may also be administered in hot tea or hot lemonade. As trional is precipitated as soon as the fluid becomes cold, the latter should be taken as hot as possible. After being employed for four to six days, it should be discontinued for several days and during its prolonged administration it is advisable to let the patient drink one or two bottles of an alkaline mineral water and to relieve constipation with enemata and laxatives. According to the experience of the above authors trional is an admirable hypnotic in cases of neurasthenic agrypnia, chronic dementia and periodical mania, while in paralysis, conditions of melancholic depression and paranoia attended with hallucinations it exerted a decided sedative influence even in fractional doses (0.5 gramme).

CLINICAL NOTES.

I HAVE frequently prescribed Doctor McArthur's syrup of hypophosphites, and have found it to be a therapeutic agent of great value in the treatment of many diseases.—O. G. Cilley, M. D., Surgeon-General, Massachusetts.

TAKA diastase being a dry powder, tasteless and of no perceptible odor, can be given in very small bulk, and for this reason I think it will prove itself of value in infant feeding, where it is desirable to give starch-containing foods, provided said food would easily dissolve and the infant's saliva could be relied upon to perform that function. That the new diastase is destined to become a favorite with the profession I have no doubt, having acquainted myself with its potency in converting starch in a minimum of time into a form ready for absorption by the system, and I think it will be found the very remedy for which we have waited so long.

MORE ABOUT KOLA.—There has been of late a vast deal written about kola, but probably nothing more complete and interesting than a little volume just to hand from Johnson & Johnson. It is compact, clear, and embellished with a score of illustrations, including a full page colored plate showing the leaf, flower and fruit in natural colors. The topics treated include West India kola, a cultivated variety, on which the publishers have expended considerable research. The physiological action of kola, action of the drug in aiding endurance in hard labor and exercise, including marching of troops, bicycle riding, mountain climbing, athletic training and the therapeutic action of the kola are fully dwelt upon. A request from any practicing physician to Johnson & Johnson, New York, will secure a copy of this book.

COMMERCIAL MEMORANDA.

SIX THOUSAND FEET ABOVE THE CLOUDS.

NEARLY three miles above the sea, and 6,000 feet above the white, silent clouds that lie in a sweeping plain beneath you, is something to think about time and time again afterwards, is it not?

In the summer of 1894 the Passenger Department of the Northern Pacific Railroad fitted out an expedition to climb the highest mountain south of the Canadian boundary on the North Pacific Coast, and the grandest peak in the United States—Mount Rainier or Tacoma. The party reached the highest point of the mountain, after a long and dangerous climb over rocks and snow and glaciers that were gashed by crevasses, and returned in safety. This magnificent peak is between 14,000 and 15,000 feet high, and indeed may be found in the future to be over 15,000 feet, or nearly three miles in height.

In a beautifully illustrated book, just published, the story of this ascent is given in great detail, together with many facts about this old mountain that was once a seething volcano. The Yellowstone Park and other parts of the great North-West are also illustrated and written about. In every respect this book is new, and contains nothing this Railroad Company has heretofore published.

Its name is "Sketches of Wonderland" and by sending three two-cent stamps—six cents—to Mr. Chas. S. Fee, the General Passenger Agent of the Company at Saint Paul, Minnesota, you will receive the book in return.

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